Declassified in Part - Sanitized Copy Approved for Release 2012/12/12 : CIA-RDP81-01043R001300140004-4 Next 8 Page(s) In Document Denied **STAT** Declassified in Part - Sanitized Copy Approved for Release 2012/12/12: CIA-RDP81-01043R001300140004-4

#### STRONG CURRENT ELECTRICAL 01 ENGINEERING

Hydrogen Cooled Synchronous Compensator of DK 6176/2 Series

supplies or takes wattless current from the net; if over-excited, it operates as a condenser while it functions as a choke-coi! in the under-excited state.

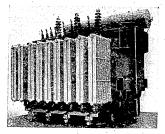
Output: 30 MVAR, 10.5 kV, 3000 r.
p. m. TECHNOEXPORT

#### Air-Cooled Synchronous Turbo-Alternator of 6H5262/2 Series

intended for the production of electric power if directly connected to the steam turbine. Output: 5000 kVA, 4000 kW, 6500 V, 460 A, 3000 r. p. m. Exciter: 45 kW, 110 V, 409 A, 3000 r. p. m. TECHNOEXPORT

#### 01/003 Three-Phase Low-Voltage Alternator

two-bearing, flange, semi-enclosed ty-pe: A8c4, 400/231 V, 20 kVA, 16 kW, A10b4, 400/231 V, 62 kVA, 49.6 kW, A16a6, 400/231 V, 500 kVA, 400 kW. STROJEXPORT



#### 01/005 On-Load Transformer 1 ER 31 M

designed for transforming electric po-wer of a 100 kV distribution system in order to supply a 22 kV net. Output: 25 MVA. STROJEXPORT

#### 01/006

Power Transformer 68,000 kVA,

 $115 \pm 5$  p. c./15 kV. The largest power transformer produced in Czechoslovakia. The oil cooling system consist of two radiator batteries which are located outside the transformer and in which the oil circulates.

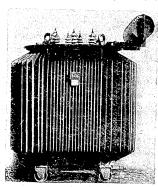
TECHNOEXPORT

### 01/007

Test Transformer Set, 350 to 1050 kV

consists of transformer units with a 3/359 kV ratio. The exhibited test transformer is the third unit of the set, designed for a test voltage of zero to 1050 kV. Output: 3/33 kVA. Output of the complete set: 1000 kVA.

TECHNOEXPORT



01/008

#### 01/008 Three-Phase Short-Circuit-Proof Transformer

The transformer winding is centrally arranged on the yoke consisting of coils which are circular in shape. Output: 630 kVA, h. voltage 22,000 V. 1. voltage 6500 V. TECHNOEXPORT

#### 01/011 Current Transformer 2 JO 220

150/300/600/1/1 A; the transformer has 150/300/600/1/1 A; the transformer has two cores, one for an output of 30 VA with an accuracy of 0.2 and overcurrent figure below 5, and the other one for an output of 60 VA within class of accuracy 1 and with overcurrent figure above 10. Weight: 1840 kg.

STROJEXPORT

#### 01/012 Voltage Transformer COF 220

220000/V3/100/V5/100/5V, output 120 VA, class of accuracy 0,5, or 600 VA, class of accuracy 0,5, or 600 VA, class of accuracy 1.

#### G1/013-014 Current and Voltage Transformer

designed for measuring rated current of very high voltages of 110 kV, 132 kV, 161 kV and 220 kV in a 100 kV switchyard. STROJEXPORT

#### 01/016 Single-Phase Autotransformers

#### 01/018 Air-Blast Circuit Breaker VV 110/d

for very high voltage switchyards. 110 kV, 1000 A, 3500 MVA, air pressure of 20 atm. Control voltage: 110/220 V d.c. STROJEXPORT

#### 01/019 Air-Blast Circuit Breaker VV 66/d

for very high voltage switchyards. 66 kV, 600 A, 2000 MVA, air pressure of 20 atm. Control volage: 110/220 Vd.c. STROJEXPORT

#### 01/020 Disconnecting Switch DOS B-110

for very high voltages with switchyard earthing switch. 110 kV, 1000 A, working air presure: 4,5 to 20 atm. Weight: STROJEXPORT

#### 01/021 Disconnecting Switch DOS B-66Z

with earthing switch, for very high voltage switchyards. 66 kV, 600 A, wor-king pressure of 4,5 to 20 atm. Weight: 100 kg. STROJEXPORT

#### กา /กัวว Minimum Oil Circuit Breakers for very high voltages

66 kV, 600 A, 1500 MVA 132 kV, 600 A, 3000 MVA 110 kV, 600 A, 2500 MVA. STROJEXPORT

#### 01/023 01/024

Autovalve Lightning Arresters 220, 132, 110 and 66 kV

Autovalve Lighting Arresters for high and low voltage, are designed to protect reliably the insulation of electric apparatus from the effects surges. STROJEXPORT

#### 01/027 Unit Head Switchboard 10 to 22 kV, 200 to 400 MVA

for medium sized industrial transformer stations with air blast and minimum oil circuit breakers with hand or air-pressure drive. Voltage: 10 and 22 kV. Output: 20 to 400 MVA.

STROJEXPORT

#### 01/028

Six-Anode Air-Cooled Mercury Rectifier 6 UI 303, 1000 A, 3300 V

air-cooled, with six sing. ves, arranged in a circle. STROJEXPORT air-cooled, with six single-anode val-

#### 01/033 Rotary Single-Phase Rectifier for very high voltage 55 kV,

used for converting alternating current into direct current of very high voltage and very low intensity for the purpose of energizing electrostatic precipitators installed for the purification of flue and chemical gases. STROJEXPORT

#### 01/034 Contact Test Rectifier

used in electrolysis. It is provided used in electrolysis. It is provided with six choke coils, connected in series to six contacts which are operated from a synchronous motor by means of eccenters, rockers and cams. Trapezoidal and direct current premagnetization, parallel circuit with semi-conductors, measuring circuit for ascertaining the moment of switching off and on by means of measuring instruments and osciloscope. off and on by means of means struments and osciloscope.

STROJEXPORT

#### 01/035 Cable Filled with Oil under Pressure, 110 kV with terminals

The three cable cores are enclosed in a steel pipe filled with insulating oil under a pressure of 14 atm. which replaces the customary lead armour. The cable, 3 150 sq mm. in crossection is made of copper and designed for 60 MVA and 110 kV. STROJEXPORT

#### 01/037 D. C. Shunt Motor 2 ARU 3044 F/4

for use in rolling mills, for driving for use in rolling mills, for ariving groups of conveyors, setting rollers, operating guide bars, etc. Output: 37,5 kW, 440 V, 600 r.p.m. Weight: 1230 kg. STROJEXPORT

#### 01/038 Three-Phase Squirrel Cage Induction Motor RPU 9-36 R/20

designed for driving roller conveyors in rolling mills. Output: 10 kgm, 500 V, 9 A, 50 c/s, 270 r. p. m. Weight: 280 kg. STROJEXPORT

#### 01/039 Three-Phase Induction Motor ER 16-51 V/8

with own surface cooling and whirl type motor for use in dusty conditions, for driving hammer or ball mills, coal pulverizing mills and crushers, etc. Output: 260 kW, 6000 V, 34 A, 50 c/s, 740 r. p. m. Weight: 3940 kg.

\*\*TECHNOEXPORT\*\*



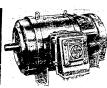
01/040

### 01/040 Three-Phase Commutator Shunt

with cooling air supply and outlet and automatic speed governor, for use with spinning, warping, winding, printing and knitting machines, cotton looms, etc. 380 V, 12,5 - 3,6 kW, 1400 - 440 r. p. m. STROJEXPORT



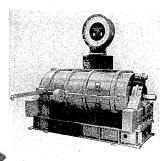




#### 01/042 Rotor of a Large Induction Aluminium Squirrel Cage Motor

for induction motrs with heavy and frequent starting, such as for the operation of coal hammer an ball mills and pulverizers. Output: 260 kW, 35 A, 730 r.p.m. Weight: 1120 kg.

STROJEXPORT



01/043

#### 01/043 Three-Phase Commutator Shunt Dynamometer

for direct measuring the torque of driving and driven machines. Output: 160 kW at 2800 r. p. m.

STROJEXPORT

#### 01/044 Three-Phase Air Contactor ST 4/60 for high voltages and a. c. up to 60 kV, 200 A

for switch rooms and industrial drives for switching loaded circuits up to 6 kV of rated voltage. Rated voltage: 6 kW. Maximum working voltage: 6,9 kW. STROJEXPORT

## Cubicle Low Voltage Switchboard

for d. c. voltages up to 440 V or a. c. voltages up to 500 V and currents up to 1000 A. STROJEXPORT

#### 01/048 System "U" Aluminium Switchboard

of standard aluminium boxes with equipment for rated voltages up to 500 V and rated bus-bar current of 600 A.

STROJEXPORT

### Spencer's Diaphragms

Thermal protection up to 110 °C, 220 V. STROJEXPORT

#### **01/050** Cubicle Switchboard SSN 600

for normal conditions (protection C) or designed to operate in coarse dust (protection F). Rated bus-bar current up to 600 A. STROJEXPORT

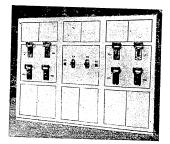
#### 01/051 Wall-Mounted Unit Head Distributor GSN

designed to operate under normal or dusty conditions (protection G). The bus-bars are for rated currents of 200, 400 or 600 A. STROJEXPORT

#### 01/052 Cubicle Switchboard SSN 2000 up to 2000 A

designed to operate under normal conditions (protection C).  $\it STROJEXPORT$ 

01/047



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# COMPREHENSIVE EXPORT PROGRAMME



SOLE EXPORTER

PRAHA — CZECHOSLOVAKIA

#### 01/053 1 Mobile Transformer Station, Type "Julie"

is a mobile unit which can be promptis a mobile unit which can be promptly set in operation where electric power supply is required. Tree-phase main transformer. Output 3150 kVA. higher voltage 35 or 22 kV. Overhead transmission line. Lower voltage 6300 and 3150 V. Outgoing feeders by cable.

\*\*STROJEXPORT\*\*

#### Mobile Transformer Station, Type "Barbora" for Mines

for use underground and mines withfor use underground and mines with-out explosion danger. Each of the three parts can be conveyed in normal cages. Output: 75 or 160 kVA. Voltage: 3 to 6 kV, 400 to 500 V. Auxiliary voltage: 24 V. STROJEXPORT

#### 01/054 Crane Dust-Proof Switchboards Type JS 10203, JR 10203

designed for the typified series of over-head travelling cranes of 5 to 50/8 T. The switchboards can be mounted in the cabin of the crane.

STROJEXPORT

#### 01/055 Load Carrying Electromagnet TM 5

designed to carry hot castings in metal-lurgical works. Input: 450 W. d. c. volta-ge: 300 V, 1,5 A. Weight: 330 kg. Maxi-mum capacity: 3000 kg.

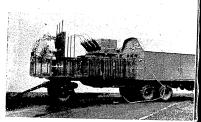
### Bus-Bar Distribution System 200 A, 400 A, 600 A, voltages up to 500 V

for the three-phase distribution of electric energy in bays of plants under normal conditions. STROJEXPORT

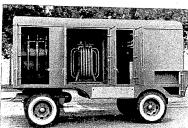
### 01/059 01/05y H. F. Melting Furnace STROJEXPORT

Insulation Tester, Type M 029, 220 V, 50 c/s

By means of this surge impulse insu-



01/053 1



01/053 2

lation tester, faults in insulation (inter-turn short-circuit, short-circuit on the frame in the stator winding) can be ascertained. It is especially suitable for standard type electric motors. In-put: 450 VA. D. C. voltage of impulse generator: 2,5 kW. STROJEXPORT

#### 01/061

Gross-Section through the HV 84589/32 Generator of the "Orlík" Hydro-Electric Power Plant TECHNOEXPORT

### 01/063

Model of an Underground Cable Duct TECHNOEXPORT

#### 01/064

#### D. C. Generator MR 2814-4

Db type, HO design, 36 kW, 115 V, 315 A, compound type, 1500 r. p. m., castiron construction with two bearing shields.

STROJEXPORT







#### 01/070 Control and Signalling Desk

with technological lay-out, designed with technological lay-out, designed for coal crushing and pulverizing plants. Control voltage: 220 V. Signalling vol-tage: 34 V. Weight: 190 kg. TECHNOEXPORT

#### 01/074 Cubicle Switch Plant, 6 kV

with two systems of bas-burs with draw-out air blast circuit breakers of STROJEXPORT

# H. V. Current Transformers

Short-circuit proof current transformer Short-circuit proof current transformer NAFD 421/340. Short-circuit proof current transformer, bushing type, NAFD 642/660. Short-circuit proof current transformer, bushing type, NAFD 863/850.

STROJEXPORT

#### 01/076 High Voltage Transformers, NV Type

Dry, two-pole insulated transformer NV 101, NV 184, NV 334, NV 444. STROJEXPORT

#### 01/077 Fuses

with fuse base outdoor mounting FTXS 10-200/11 (with FTXA 10-20/11 cartridge) FTXS 22-200/11 (FTXA 22-15/11) FTXS 35-200/11 (FTXA 35-10/11). STROJEXPORT

#### 01/078 Fuses to 60 A

with fuse base for outdoor mounting FTXT 10-200/11 (with FTXB 10-60/11 cartridge) FTXT 22-200/11 (with FTXB 22-40/11 cartrige) FTXT 35-200/11 (with FTXB 35-30/11 cartrige).

STROJEXPORT

#### 01/079 Three-Pole Cut-Out Fuses to 60 A

FTTT 10-500/31 three-pole cut-out switch with three FTCB 10-60/11 cartridges, FTTT 22-200/31 with three FTCB 22-40/11 cartridges, FTTT 35-200/31 with three FTCB 35-30/11 cartridges STROJEXPORT

#### 01/080 Electromagnetic Contactors to 500 V

Four-pole air contactor HS 25-41. Three-pole air contractor with in-built thermal relay HBST 60-31, HBS 100-31, HBS 200-31, HBS 400-31, HBS 600-31.

#### 01/081 Air Blast Circuit Breakers, $10~\rm{and}~35~\rm{kV}$

Three-pole air blast circuit breaker, resistance type, CPR 201-10/600. Three-pole air blast circuit breaker CP 605-10/2000. Three-pole air blast circuit breaker for repeat switching, CP 405-35/600. STROJEXPORT

#### 01/082 Control Valve for QC 20-1 Air Blast Circuit Breakers

STROJEXPORT

### 01/083 Disconnecting Switches, 22 and

Single-pole disconnecting switch for outdoor mounting TEPD 22/600-11 with air-pressure drive. Single-pole special disconnecting switch for outdoor mounting TEPK 35/600-11. STROJEXPORT

#### 01/084 Isobreaker 10 kV, 400 A with 3 FTCS 10 fuses incl. cartridges

#### 01/085 Bulk Oil Circuit Breaker 35 kV, 400 A, 400 MVA

Three-pole oil circuit breaker OVH 35/532. STROJEXPORT

#### 01/086 Oil Circuit Breaker. Type VOP 10/600-33

Three-pole oil circuit breaker VOP 10/600-33. STROJEXPORT

#### 01/087 Air Circuit Breakers 100, 350, 600 A to 500 V

Three-pole air circuit breakers VMT 333, VMT 533, VMT 600-33. STROJEXPORT

#### 01/088

#### A. C. Contactor Thermal Relays for use under unfavourable climatic conditions

Three-pole thermal relays ET 60-31, ET 100-31. Three-pole short-circuit proof thermal relays ETZ 200-31, ETZ 400-31, ETZ 600-31. STROJEXPORT

#### 01/089 Three-Pole A. C. Air Contactor, 1000 A

STROJEXPORT

STROJEXPORT

01/090 Trip VMT for Air Blast Circuit Breakers

#### 01/091 Three-Pole Air Blast Circuit Breaker VMKN 3000-33 STROJEXPORT

01/092 Four-Pole Circuit Breaker LMTC 433

#### STROJEXPORT 01/093 Automatic Dehydrator AOV 25

for use with compressor stations in switch plants and power stations. STROJEXPORT

#### 01/094 Outdoor Fuses to 20 A for 10, 22, 35 kV

35-6/11 cartridge. STROJEXPORT

#### 01/095 Outdoor Fuses to 60 A for 10, 22, 35 kV

FTCT 10-200/11, fuse base with FTCB 10-60/11 cartridge. FTCT 22-200/ fuse base with FTCB 22-40/11 cartridge. FTCT 35-200/11 fuse base with FTCB 55-70/11 cartridge. 35-30/11 cartridge. STROJEXPORT

#### 01/097 Three-Pole Air Blast Circuit Breaker CP 1003-10/4000

Rated voltage: 10 kV. Rated current: 4000 A. Output: 1000 MVA. STROJEXPORT

18

#### Electromagnetic Valve for the Control of QAM Disconnecting Switches, with pneumatic drive

### 01/099

#### Hand Valve for the Control of QAR Disconnecting Switches

with pneumatic drive. Maximum working pressure: 20 atm. STROJEXPORT

#### Switchroom Coupling Valve 00 20-1

Maximum working pressure 20 atm. g. STROJEXPORT

#### 01/101 Incoming Compartment of L. T. Switchboard NS-81

with air contactor VMTN 2000-33, 500 with air contactor VMIN 2000-33, 300 V a. c. Rated current: 2000 A. Draw-out type. STROJEXPORT

#### 01/103 Three-Phase Induction Motors

for an output range of 0,6 to 100 kW, four-pole type, copper winding. 14 identical outputs for all speeds and types.

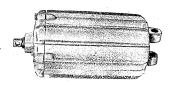
STROJEXPORT

#### 01/105 Small and Very Small Induction Motors STROJEXPORT

#### 01/106 Three-Phase Electric Compressors

stationary, portable or mobile for use in beer-shops, for inflating tyres, spraying paints and other purposes. Voltage: 380/220 V. Output: 65 or 135 litres per min. Working pressure: 4 or 5 atm. Maximum pressure: 8 or 10 atm.

STROJEXPORT



01/108

#### 01/108 ZTH Electro-Hydraulic Apparatus

for releasing brakes of cranes and remote control of points, small presses, couplings, valves, various clamping devices, etc. Voltage: 380 V. Power of stroke: 25 to 185 kg. Stroke: 50 to 180 mm. STROJEXPORT STROJEXPORT

### 01/109 MRZ Three-Phase Reversing

designed for the drive machine tools and frequent reversing. Voltage: 380/220 V. Output: 4 to7 kW, 1400, 2800 r. p. m. STROJEXPORT



01/106

#### 01/110 D. C. Sets-TDN-S, SDT Motor-Generators

Dynamo voltage: 110, 220, 440 V. Output: up to 25 kW. STROJEXPORT

### TDN-S, SDT Ward-Leonard Set

The voltage can be adjusted from the rated voltage to zero. Output: up to  $25~\mathrm{kW}.$ 

### 01/112

Outdoor Cable and Box with noncemented insulator for 22 to 35 kV Type KVJ 40 FERROMET

#### External Gas Pressure Cable with double lead armour, 110 kV

suitable even for very steep\_slopes FERROMET

#### External Gas Pressure Cable, 110 kV

suitable for densely populated and in-dustrial areas. FERROMET FERROMET

#### Rubber cable 3×150 sq. mm., 6000 V

serves as a flexible supply line to mo-bile appliances or sources of power (mine excavators, railway truck mounted power plants, etc.). FERROMET

#### 01/113 Glass-Textile Insulation FERROMET

#### 01/115 Three-Phase Squirrel Cage Induction Motor

Hange-mounted, explosion-proof, for danger degree 2, enclosed design E×3 MB: 1K42D2 - 380 V, 2,3 kW; 1K81D2 - 380 V, 12 kW; 1K9 1D4 - 380 V, 22 kW. STROJEXPORT

#### 01/116 Three-Phase Squirrel Cage Induction Motor

for use with cranes and heavy mine equipment. HRP52S4 - 380/220 V, 3.2 kW/40 p.c.; HRP72S8 - 380/220 V, 6.6

kW/40 p.c.; HRP1142S6 - 380/220 V, 80 kW/40 p.c. STROJEXPORT

### 01/117 01/117 Electrolytic Dynamos STROJEXPORT

#### 01/118 Automatic Air-Breakers. Air-Breakers,

motor protection, oil immersed, cataract, de-ion.

#### 01/119 Unit Head Resistors, Brake Electromagnets, Controllers

STROJEXPORT

### Single-Pole Air- Breakers IJV, IJM

for the protection of lines and single-phase motors. Rated voltage: 500 V a.c. STROJEXPORT

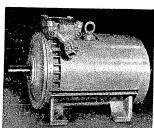
#### 01/121 Equipment for Cranes

(high-capacity fuses, fuse bases, fuse holders, tubular fuses, Spencer's diaphragms, air-pressure switch, plunger switch, dilatation flexible clutch, rail coupling). STROJEXPORT

#### 01/122 Limit Switches STROJEXPORT

#### 01/123 Drum Type Switches V25R, V40R, V60R, V100R

for switching electric circuits, motors, for use in switchrooms, etc. Rated voltage: 500 V a. c. STROJEXPORT





#### 01/124 Three-Phase Rotor Oil Starters SOR 1 - 5 and SDO 6

for starting slip-ring induction motors. Rated voltage: 500 V a. c. STROJEXPORT



01/125

#### 01/125 Three-Phase Outdoor Sockets and Plugs ZV 25, ZV 60, VZ 25, VZ 60, VZK 25, VZK 60

for connecting electric circuits outdoors such as farming, building and other machines. Rated voltage of sockets and plugs: 25 A, 380 V a. c. 60 A, 500 V a. c. STROJEXPORT

### 01/126 Disconnecting Switches OD, ODT,

for high voltages, for use in switch-rooms. Rated voltage: 1, 20, 22, 35 kV.
STROJEXPORT

#### 01/127 Electric Hand Tools

### Electric Hand Drill E 603/II

for light metals and wood. Weight:

### Electric Hand Drill EV 213/I

for small assembly jobs. Weight: 4.40 kg.

### Electric Hand Drill EV 115

(sturdier design). Weight: 5.90 kg.

### Electric Screwdriver EŠ 110

for screws up to M 10. Weight: 3.90 kg.

### Electric Grinder EB 15

for finish grinding and cleaning of welds, castings, center grinding and heavy assembling jobs. Weight: 11 kg.

### Electric Chaser EGS 612/II

for thread cutting of heavy workpieces and assembly work. Weight: 4.80 kg.

#### Power Shears NJ 102

for cutting soft steel plates up to 2 mm in thickness. Weight: 4 kg.

### Power Shears EN 3

for cutting soft steel plates up to 3 mm in thickness. Weight: 5,80  $\,\mathrm{kg}.$ 

### Electric Mine Drill E 428/II

for drilling deeper bore-holes (up to 6 m) up to 36 mm in diameter in mines and quarries. Suitable for ores, salt, limestone and soft or mediumhard rock. Weight: 15,50 kg.

### Electric Angle Drill UV 204

for drilling holes in inaccessible places, for drilling holes in inaccessible places, especially used in the aircraft and motor car body industries. Weight: 2 kg.

MOTOKOV

#### 01/129 Centrifugal Pumps CRN and CRA, Power Operated

for handling water, coolants, etc. Voltage: 380/220 V. Output: 10 to 40 litres per min., 0,2 to 0,4 atm.

. STROJEXPORT

#### 01/130 Shunt Regulator DRV 5/140 M

with cam control and motor drive for the voltage and sped regulation of d. c. shunt motors. TECHNOEXPORT

#### 01/131 Expansion Circut Breaker for High Voltages

35 kV, 1000 A, 600 MVA with pneumatic drive. STROJEXPORT



01/137

#### 01/137 Gear Pumps CSP and CSA, Power Operated

for handling oils. Voltage: 380/220 V. Output: 0,5 litre per min., 3 atm., 2 litres per min., 5 atm. STROJEXPORT

#### 01/151 FTR 2000 Filtering Station

Serves for filtering and de-hydration of transformer oils. Nominal output of station 2000 lt./h or 440 lmp. galls./h. Motor input 4.5 to 5.5 kW. Weight 1050 kg or 2315 lbs. KOVO



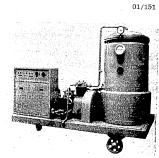
#### 01/138 BNT Three-phase and Vertical

for sharpening tools, grinding forgings and castins, etc. Voltage: 380/220 V. Output: 0,33 to 5,5 kW. MOTOKOV

#### 01/142 One Half of a Large Turbo-Alternator Coil

pressed and pressure compund type, corrosion-proof, with glass and mica-asphalt insulation. Insulation for a working voltage of 15 kV.

TECHNOEXPORT



#### 02 POWER

#### 02/001 Conveyor Type Stoker

for the combustion of low-grade fuels. It differs from the ordinary type of stocker in that the fire bars are of the travelling type as is the case with L type chain grate stockers. Width of

stocker: 1550 mm. Length: 5410 mm. TECHNOEXPORT

#### 02/002 Block of Flag Boiler Tubes

used for steam boilers (tubes with rolled on flags,  $60\times5$  mm in dia). TECHNOEXPORT

#### Differential Mercury Pressure Gauge up to 200 atm

Differential pressure up to 800 mm of the mercury column. The milimetre scale slides vertically within a narrow scale stides vertically within a harrow range. The apparatus is mounted on a TECHNOEXPORT

#### 02/004

#### Differential Pressure Gauge with Oblique Arm for pressures up to 200 atm. g.

Suitable for accurate measurement of Suitable for accurate measurement of small pressure differences. Range: Pressure difference of 20 to 60 mm. of Hg with an accuracy of 1 p. c. TECHNOEXFORT

#### 02/005

### Semi-Automatic Sand Filter

two-stage type, for water filtration and two-stage type, for water filtration and softening. Simple and easy operation combined with perfect visibility are the main advantages which these filtres provide even if they are coupled next to each othe. Diameter of filter: 850 mm. Height of filter: 3500 mm. Weight without filling: 1000 km. mm. Height of three. Without filling: 1000 kg.

TECHNGEXPORT

#### 02/006 Hammer Mill, 14 t/hr

for drying, pulverizing and grading of bituminous and brown coal and lignite with a maximum moisture content of 55 p. c. and 0 to 15 mm in size. Maximum diameter: 20 mm. It is manufactured for outputs of 0,5 to 24 cu metres per hour according to the kind of fuel and the required fineness.

\*\*TECHNOEXPORT\*\*

#### 02/007

### Condenser - Steam Cooler

is a part of the steam boiler. It produces condensate from the saturated steam of the main cylinder which is required for cooling the superheated steam to the desired temperature. Cooling surface: 24 sq. metres. Condenser output: 5 to 8 tons per hour. Condenser or pressure loss: 0.6 atm.

TECHNOEXPORT

TECHNOEXPORT

#### 02/008

### Fully Automatic Oil Burner

Fully Automatic Oil Burner intended for the combustion of thick or thin oils in smaller boiler units up to a capacity of 8 tons per hour. Capacity of burner: 250 kg. of oil per hour. Oil pressure: 25 atm. g. Combustion air: 60 mm. of the water column. Required viscosity of oil in the burner: 1,5 to 3° E. TECHNOEXPORT

#### 02/009

### Turbulence Burner PH 8

Turbulence Burner PH 8
for the combustion of gas fuels with
a short flame, especially earth gas. In
addition to gas fired or steam boilers
it can also be used for the conversion of annealing, drying or other kilns
into gas fired units. Capacity of burner: 800 Ncu. metres per hour. Burner gas pressure: 5,000 mm. of the
water column. Combustion air presswater column. Combustion air pressure in the burner: 80 to 100 mm. of the water column. TECHNOEXPORT

#### 02/010

#### Slag Removing Equipment (Deslagger)

It crushes large lumps of slag which are dropped down the furnace, and drives off the slag to the outlet. The slag is then discharged into a truck. Capacity: 1500 to 3000 kg of slag per hour (1 or 2 strokes per min. Size: 800×800 mm. TECHNOEXPORT

### 02/011 Air Heater 2,5×2,5×4 metres

# for use with G230 boiler for heating air from 50 to 400 $^{\circ}\mathrm{C}_{-}$

TECHNOEXPORT

#### 02/012-013 Automatic Low-Pressure

# Boiler P 27

designed to speed up the ignition of pulverized fuels.

#### Automatic Low-Pressure Boiler P 27

for methanefiring. These economic steel boilers are designed for central heating. Low-grade fuels are burned on the grates of this boiler with an efficiency of about 80 p. c. and without producing smoke.

TECHNOEXPORT

### 02/014

#### Double Casing Backpressure Steam Turbine

Efficiency: 16,600 kW, 3000 r. p. m. Inlet steam pressure: 69 atm. a., maximum pressure: 81 atm a. Temperature: 485 °C. Maximum temperature: TECUNOEXPOPT 500 °C. TECHNOEXPORT

#### 02/016

#### Runner Blades of a Condensing Turbine, 20 MW TECHNOEXPORT

#### 02/017 High-Pressure Feed-Water Heater

(vertical, two-way type). Heating surface of the tube nest: 100 sq. metres. Steam pressure: 30 atm. Water pressure: 150 atm.

#### TECHNOEXPORT

#### Pressure Oil Burner for the burning of mazout, type TOH-6

The burner atomizes the liquid fuel in order to accelerate its gasifying; by means of a suitable control of the entering combustion air, it is perfectly mixed with the fuel in the burner. Maximum consoits: 600 kg of oil ner ximum capacity: 600 kg. of oil per hour. TECHNOEXPORT

#### Vertical Spiral Casing of a Francis Turbine, Type F 8

to be directly coupled to a three-phase generator. It is designed to operated under a head of 260 metres. Water flow: 10 cu.meters per sec. Capacity: 23,300 kW, 500 r. p. m.

\*\*TECHNOEXPORT\*\*

#### 02/020 Hydraulic Speed Governor, Type HRO VI

for use with a vertical spiral casing Francis turbine. It is designed for the automatic regulation af the speed of the turbine. Capacity: 8000 kgm. TECHNOEXPORT

#### 02/021 HRO VI Pumping Set

#### TECHNOEXPORT

#### 02/022 VK 50 Condensing Steam Turbine

A double-casing type steam turbine of LZP system with five non-regulated bleeders for heating feed-water and for condensate, for use with generator, directly coupled to the turbine. Capacity: 50,000 kV, 5000 r. p. m.Steam pressure: 90 atm. a. TECHNOEXPORT

#### 02/023 Rotor of a Steam-Gas Turbine of 4.4 MW capacity

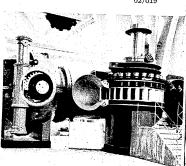
The rotor is installed in a blast furnace gas turbine. The wheel which is made of ferric materials, is air cooled, the runner blades are made of POLDI AKNO steel. Inlet temperature of combustion gases: 750 c. 2.82 atm. a. Rotor speed: 8500.

TECHNOEXPORT TECHNOEXPORT

### Regulating Equipment of Steam Turbines for Medium Outputs

for use with condensing turbines, con-densing turbines with one regulated bleeder and backpressure turbines with bleeder and backpressure.

TECHNOEXPORT



Set of VK 50 Turbine Blades

TECHNOEXPORT

#### 02/027 Air Turbo-Compressor, 6300 cu. metres per hour, 8 atm. a.

for industrial purposes. The turbo-compressor is driven by a 900 kW synchronous motor. TECHNOEXPORT

#### 02/028

Single-Wheel Turbo-Blower, 10,000 cu. metres per hour, 1.6 atm. a.

for use in chemical, food and other industries. The turbo-blower is driven by means of a 250 kW induction motor.  ${\it TECHNOEXPORT}$ 

#### 02/029 Unit Exhaustor Type JOVUN

designed for the removal of vapours and smoke inside closed vessels and steel structures, as well as for outdoor welding jobs where inlet hoses can be located in close proximity of the weld products.

\*\*TECHNOEXPORT\*\*

#### 02/030 Industrial Vacuum Cleaner

intended for the cleaning of floors and machines of dust, fly ash, grinding dust, fibres and ashes; it is not suited for greasy and adhesive dust, chips, etc. Fan capacity: 550 to 385 cm metres per hour.

TECHNOEXPORT

#### 02/031 Unit Type SVAREX Exhaustor

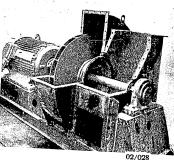
It finds use in welding shops where the welder does not change his place. Fan capacity: 5360 cu. metres per hour. STROJEXPORT

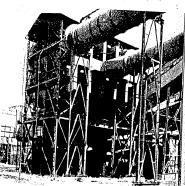
#### 02/032-036 Radial Flow Fans

low-, medium- or high-pressure type, with one or two inlets, and axial control, for air, smoke and other media.

Standard reinforced, rubber-lined, armour, gas-tight or explosion-proof design.

STROJEXPORT





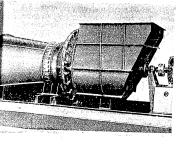
#### 02/033 Dust Extractor

for steel-works, chemical or food industries, power plants, cement factories and heating plants. It consists of indepedent dust extracting units with own fans.

TECHNOEXPORT

#### 02/034 Air-Conditioning Unit

TECHNOEXPORT



02/037

#### 02/037 Axial Flow Fan, 1600 in dia.

The fan is used in boilers for blasting air into furnaces, in mines and tunnels for air-conditioning and in workshops for the extraction of dust. Capacity: 39 cu. metres per sec. Output of electric motor: 110 kW. Weight of fan including motor: 8400 kg. TECHNOEXPORT

#### 02/038 Model of Vertical Axial Flow Fan

for use in mines and workshops. Capacity: 11,200 cu. metres per min. Electric motor output: 560 kW. Weight of fan including motor and accessories: 137 kg. TECHNOEXPORT

#### 02/039 Electrostatic Separator for Air Cleaning

designed for the removal of solid particles and liquid admixtures in the atmosphere (various kinds of dust, germs, etc.). TECHNOEXPORT

#### 02/161 Model of a New Type of Stoker

for coal dust and other fuels which are easily baked. 1:20 scale.  ${\it TECHNOEXPORT}$ 

#### 02/162 Model of a Granulating Boiler

Capacity: 125 tons per hour, 100 atm. g. The boiler is suitable for burning grown.

trough brown coal with a calorific value of 2200 to 2500 kal/kg, 20 p. c. ash. and 40 p. c. water-content.

TECHNOEXPORT

#### 02/163 Model of a Cyclone Fired Boiler,

for burning bituminous coal of inferior quality and 3080 kcal/kg heating value. Capacity: 75 tons per hour, 40 atm. g., 420 °C. The slag leaves the fire space in a molten state. Computed boiler efficiency: 87.5 p. c. As against standard boilers for unified fuels, this type of boiler provides an economy of 3000 tons of coal p. a. In addition, various economies are obtained in operation due to lower costs of operation and removal of fly-ash and slag. TECHNOEXPORT

# 02/164 Model of G 230 Granulation Boiler with pulverized coal furnace for burning low-grade fuels

The boiler is designed for block-assembly. Rated capacity: 230 tons per hour. Economical output: 280 tons per hour. Maximum working pressure: 100 atm. Working pressure: 96 atm. Maximum operating temperature: 545 °C.

\*\*TECHNOEXPORT\*\*

#### 02/165 Model of G 330 Steam Boiler

designed for burning brown coal with a heating value of  $2200 \pm 200$  kcal/kg and maximum 45 p. c. moisture content. Rated capacity, 335 tons per hour. Maximum working pressure: 148 atm. Maximum operating temperature: 565 °C. TECHNOEXPORT

# 02/167 Automatic Katex Flow-Type Filter with continuous regeneration

This filter is designed for uninterrupted softening of water. While two katex filters of the same size are required for uninterrupted operation of other types of filters only one automatic katex filter can be used for the same purpose.

TECHNOEXPORT

#### Model of a Radiant Steam Boiler

The oil fired boiler has a capacity of 125 tons per hour, 75 atm. g., 525 °C of superheated steam. The boiler is provided with a complete oil economy equipment, including storage tanks, an oil pressure heating station and a repump-ing equipment for discharging tank TECHNOEXPORT

#### 02/169

#### Regeneration Boilers for Burning Sulphate Waste Lyes

The panel illustrates the sulphate regeneration process.

### Model of Regeneration Boiler

for a sulphate cellulose plant. Capacity: for a sulphate cellulose plant. Capacity: 75 tons of perfectly dry reed cellulose per 24 hours, including 25 tons of steam at a pressure of 40 atm. per hour.

\*\*TECHNOEXPORT\*\*

#### 02/171 Model of a 100 MW Condensing Steam Turbine

Three casing type, with double exhaust outlet for deep vacuum utilization. Steam pressure: 135 atm. Temperature: 555°C. Reheated to 540°C. Vacuum: Vacuum: TECHNOEXPORT

### 02/172 Model of a Packaged Power Plant,

A new type of transportable assembly units of 1500 kW and 750 kW capacity, designed to supply remote places with electric power.

TECHNOEXPORT

#### 02/173 Refrigerating Turbo-Compressor for Propane-Propylene Mixture

for use in the chemical and food-pro-cessing industries. Capacity: 3,200,000 kcal/hour. Drive by means of a 2200 kW synchronous motor. TECHNOEXPORT

#### 02/174 Air Turbo-Blower

suitable for the largest blast furnaces with a capacity of 1500 cu. metres. Out-

put: 240,000 cu. metres per hour, 3.8 atm. The turbo-blower is operated by means of a condensing steam turbine of means of a condensing steam curome of a maximum capacity of 17,000 kW.

TECHNOEXPORT

#### 02/175

### Separator, 315 mm. in dia.

(Multidyne Type) designed for the separation of all organim and inorganic dusts, with basalt

#### 02/176 Various Basalt Hollow Blocks

with metal coating. Arch, combined arch, pipes, Y and T pieces for various systems of pneumapieces for various systems of pneumatic or hydraulic transport of hard materials with sharp edges, various castings, hollow blocks and floor-tiles, a straight pipe, 80 in dia with welded plate coating, a basalt pipe with steel plate coating.

\*\*CERAMICS\*\*

#### 02/177 Steel Arch,

blasted for 2160 hours.

#### Basalt Arch,

coated, after 20,400 hours in operation showing only a minimum of wear CERAMICS

#### 02/178 Redler Conveyor

for handling heavy materials, such as coke, ores, etc.

#### Y-piece of a Trough CERAMICS

#### 02/179

#### Model of a Double-Drum Steam Boiler, 20 T/hr., 40 atm., 456 °C of Superheating, with Conveyor Type Stoker

The boiler meets even the heaviest operating requirements. The boiler is plated and provided with a light brick lining, and provided with a light brick lining, carried in tubes in various sections of the boiler. Rated boiler capacity: 20 tons per hour. Maximum working overpressure: 39 atm. g. Maximum working temperature: 450 °C. Feed-water: 1.05 °C. TECHNOEXPORT

#### 03 INDUSTRIAL VALVES

#### 03/040-042 Globe Valves.

Nominal Pressure 400 kg/sq. cm (5600 1b/sq. in.), welded or flanged type, nominal sizes 8 mm, or langed type, nominal sizes 8 mm, 10 mm, 15 mm, 25 mm, 40 mm, 50 mm (3/6", 1/2", 1", 1 1/2"2"). Inserted disk (cone), rising spindle, stationary. Used for high-pressure pumps. Up to the nominal sizes 40 but with nominal pressure of 540 they serve as equipment of hydraulic presses. STROJEXPORT

#### 03/043-047 Globe Valve, Angle Type,

Nominal Pressure 325 kg/sq.cm (4875 Nominal Pressure 325 kg/sq.cm (4870 lb/sq. in.). Flange type, nominal sizes from 3 to 120 mm (4.5"), up to a temperature of 200 °C - valves made of carbon steel - and 510 °C (950 °F) - valves made of alloy steel. Used for chemicals, such as N H NILL STROLLEYPORT such as N, H, NH3 STROJEXPORT

#### 03/048 "Y" Valve,

made of 99,8 pure aluminium; used for strong nitric acid, concentrated, up to a pressure of 5 kg/sq. cm (71 lb/sq. in.) and a maximum temperature of 90 °C and a maximum temperature of 50 (194 °F). The rising spindle is controlled by a handwheel. Yoke type.

STROJEXPORT

#### 03/049 High-Speed Valve.

mounted to the main steam pipe of 12 mounted to the main steam pipe of 12 MW turbines, and above. By means of this valve, turbines are safeguarded against failure of the starting valve. Nominal size 150 mm ("), 200 mm (8") or 250 mm (10"). STROJEXPORT

#### 03/050 Gate Valve for Gases,

Nominal pressure 64 kg/sq. cm (900 1b/sq.in.), yoke type or with stem (spindle) with inside screw. Used for pipe lines and the distribution of coke gas, natural or coal gases. Parallel, cylindri-cal flange type, handwheel controlled. heel controlled. STROJEXPORT

#### 03/051 Gate Valve for Hydraulic Deslagging,

Nominal Pressure 10 kg/sq.cm (150 lb/sq. in.), flange type. The sealing surfaces of the closure which are welded faces of the closure which are which on by hard metal, and the basalt wedge resist excessive wear during transport of pulverised slag from boiler furnaces by means of pressure water.

#### STROJEXPORT

#### 03/052 Gate Valve with Electric Drive

used in the metallurgical industry, for smelting gas, generator gas, coke or mixed gas pipe lines, at a maximum overpressure of 1,5 kg/sq. cm (21 1b/sq. in.) and maximum temperature of 400 °C STROJEXPORT

#### Steam Trap, Valve Type,

welded. The valve closure is controlled by means of a bell type plunger. Used by means of a bell type plunger. Used for the automatic draining of the con-densate from horizontal pipes. Manu-factured for nominal pressure of 40, 64 and 100. STROJEXPORT STROJEXPORT

#### 03/054

Main Closure of Boring Bar Probes, designed to avoid eruptions. Welded. For pressures up to 70 kg/sq.cm (995 1b/in.). The sealing creates two jaws around the boring bar which are compressed by means of mindise and hand pressed by means of spindles and hand-wheels. STROJEXPORT

#### 03/055 Reducing Valve with Direct Regulation.

Nominal Pressure 25 kg/sq. cm (350 1b/ Nominal Fressure 25 kg/sq. cm (350 lp/ sq. in), welded, provided with a spring load. The amount of reduced pressure is determined for various pressure ranges. It is used for reducing steam pressure down to 20 kg/cq.cm (300 lb/ sq.in.) and a temperature of 400 °C (759 °C) STROJEXPORT

#### 03/056

### Feed Valve, Regulation Type,

Nominal Pressure 64 kg/sq. cm (900 1b/ sq. in.), provided with two pistons with

cylindrical disks (cones) and regulating cylindrical disks (cones) and regulating holes. It is controlled by means of a thermostat, and serves for the regulation of water, fed into the steam boilers, up to a pressure of 64 kg/sq. cm (900 1b/sq. in.) and a temperature of 500 °C (572 °F).

STROJEXPORT

#### 03/057 Water Level Gauge with Coloured

up to a pressure of 120 kg/sq. cm (1700 1b/sq, in.). The design of the holder enables the inclined glasses to create

a prismatic space, trapezoidal in cross-section. With the aid of an illumina-ting equipment and a filter the water column appears green, the steam co-STROJEXPORT

#### 03/058

### High-Pressure Water Level Gauge,

illuminated, with coloured indication. The glass rollers are arranged against each other in two rows, one of them being offset by half a pitch. Suitable for the highest pressures.

STROJEXPORT

# VALVES FOR POWER PLANTS

#### 03/059

### Globe Valve, Yoke Type,

Giode Vaive, Yoke Type,

Nominal Pressure 40 kg/sq. cm (600 lb/sq. in.), straight, flanged, with screwed, rising stem (spindle) and hand-wheel. Suitable for cold or hot water, steam and gases up to 40 kg/sq. cm (600 lb/sq. in.) and a temperature of 450 °C (841 °F). Supplied also with foot as well as regul. cone. STROJEXPORT

#### 03/060 Globe Valve,

Globe Valve,

Nominal Fressure 64 and 100 kg/sq. cm (900 and 1400 lb/sq. in.). Straight, flanged, yoke and angle type valve with outside screw, controlled by means of a handwheel. Available for nominal pressures of 64 and 100 kg/sq. cm (900 and 1400 lb/sq. in.) and various sizes up to 40 mm (1½") included. They are of metal. Suitable for water, steam and gases up to a maximum of 500 °C (932 °F). STROJEXPORT

#### 03/061 Globe Valve, Yoke Type,

Globe Vaive, Yoke Type,
Nominal Pressure 200 kg/sq. cm (2806 lb/sq. in.). Welded, special design with spring mounted stem. Suitable for liquids, steam and gases up to a temperature of 400 °C (752 °F).

STROJEXPORT

#### 03/062-063 Globe Valve,

Nominal Pressure 250 kg/sq. cm (3500 lb/sq. in.). Flanged and welded-on type, up to a maximum temperature of 525  $^{\circ}$ C (976  $^{\circ}$ F) with rising stem, controlled by

a handwheel. Nominal sizes of 15 to 50 mm ( $^{1\!\!/_{\!\!2}}$  to 2"). STROJEXPORT

#### 03/064 Globe Valve,

Nominal Pressure 250 kg/sq. cm (3500 lb/sq. in.). Nominal Size 8 mm. Flanged and welded-on type, suitable for a maximum temperature of 525°C g76°F) as an accessory for measuring instruments (pressure gauges, etc.).

STROJEXPORT STROJEXPORT

#### 03/065 Globe Valve,

Nominal Pressure 250 kg/sq. cm (3500 lb/sq. in.), for superheated steam and measuring diaphragms of steam boilers.

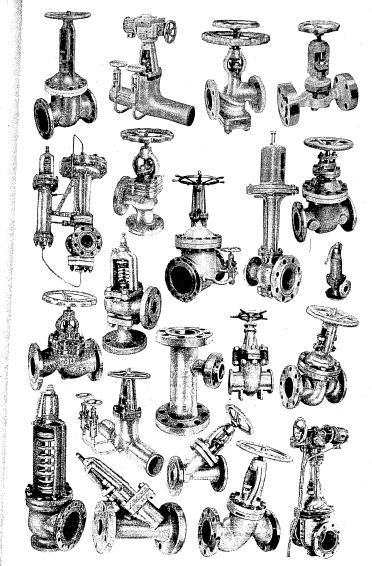
STROJEXPORT

#### 03/066 Non-Return Valve, Nominal Pressure

160 kg/sq. cm (2300 lb/sq. in.), with airtight bonnet. The seating surfaces of the closure are welded with hard alloy. Available in flange and welded-on types. Suitable for water and steam up to a working pressure of 525 °C (976 °F). STROJEXPORT

#### Vertical Non-Return Valve with Automatic By-Pass

Automatic By-Pass
suitable for pressures of 6 to 250 kg/
sq. cm (85 to 3500 lb/sq. in.) and nominal
sizes of 70 to 200 mm (23/ to 8"), flanged type. The welded sealing surfaces
of the seats in the body and disk are
made of stainless steel. The movement
of the automatic by-pass closure is connected to the disk. STROJEXPORT



#### Cast-steel Gate Valve, Yoke Type,

Nominal Pressure 16 kg/sq.cm (230 lb/sq.in), flange type, oval, with solid wedge. Long distance control by means of handwheel or electric drive. Also available for nominal pressures of 6 and 150 kg/sq. cm (85 and 150 lb/sq. in.).

STROJEXPORT

#### 03/069 Yoke Type Gate Valve,

Nominal Pressure 25 kg/sq. cm (350 lb/sq. in.), cylindrical, flanged, with spring wedge. Steel. Sizes above 150 mm (6") manufactured with split wedge. The stem (spindle) is carried in a ball bearing. Suitable for water steam, water, nonaggressive gases and nominal pressures of 40, 64 and 100 kg/sq. cm (600, 900 and 1400 lb/sq. in.). Sizes of 40 to 500 kg/sq. cm (11/2 to 20 lb/sq. in.). Maximum working temperature 550 °C (1022 °F).

STROJEXPORT

#### 03/070-071 High-Pressure Gate Valve,

Mighi-Fressure value valve,

Nominal Pressures 160 and 250 kg/sq.
cm (2300 and 3500 lb/sq.in.), yoke
type with pressure seal bonnet and
spring mounted wedge. Flange and
welded type connection. Handwheel with
shock mechanism. Also available with
long distance control. Suitable for water steam up to a working temperature
of 525 °C (976 °F). STROJEXPORT

#### 03/072 Steam Trap -

96 atm., 525° C (976° F), made of forded T section, nominal size 200 mm (8"), nominal pressure 160 kg/sq. cm (2500 lb/sq. in.) at a temperature of 525° C (976° F), with 3 gate valves, 200 mm (8") in size and 160 kg/sq.cm (2300 lb/sq. in) nominal pressure et a temperature of 525° C (976° F) and by-pass 25 mm (1") in size and 250 kg/sq. cm (3500 lb/sq. in.) nominal pressure at a temperature of 525° C (976° F). The gate valves are provided with 25 kgm long distance control, or can be push-button or manually operated. STROJEXPORT

#### 03/073 Mix Gate Valve

designed for mixing steam or vapours. Available for nominal pressures of 64, 100, 160 and 250 kg/sq. cm (900, 1400, 2500 and 3500 lb/sq. in.). Three-way, flanged, right-hand or left-hand type; the third flange is designed to carry the steam cooler. STROJEXPORT

#### 03/074

#### Low-Load Weight Relief (Safety) Valve,

Nominal Pressure 40 kg/sq. cm (600 lb/sq. in.), flange angle type. The valve automatically opens as soon as the given pressure is exceeded. Suitable for water, liquids, steam and gases and pressures up to 16 kg/sq. cm (230 lb/sq. in.) at a temperature of 400 °C (752 °F).

STROJEXPORT

# 03/075 Low-Load Weight Relief (Safety) Valve,

Nominal Pressure 100 kg/sq. cm (1400 lb/sq. in.), same type as above. For pressures up to 42 kg/sq.cm (628 lb/sq. in.) and a maximum temperature of 400  $^{\circ}$ C (752  $^{\circ}$ F). STROJEXPORT

#### 03/076 Full-Weight Relief (Safety) Valve,

Nominal Pressure 100 kg/sq. cm (1400 lb/sq. in), double with cover, suitable for draining larger quantities of liquids. Designed for steam boilers and pressures up to 42 kg/sq.cm (628 lb/sq.in.) at a maximum temperature of 400 °C (752 °F). STROJEXPORT

### Full-Weight Relief (Safety) Valve,

Nominal Pressure 250 kg/sq. cm (3500 ib/sq. in.), same as above. Up to 110 kg/sq. cm (1550 lb/sq. in. and a temperature of 400 °C (752 °F).

STROJEXPORT

# 03/078 Low-Weight Relief (Safety) Valve, Spring Type,

Nominal Pressure 100 kg/sq. cm (1400 lb/sq. in.). flange, angle-type, with cooling cover. Suitable for higher temperatures for steam, air and gases up to 100 kg/sq. cm (1400 lb/sq. in.) and a maximum temperature of 400 °C(753°F.)

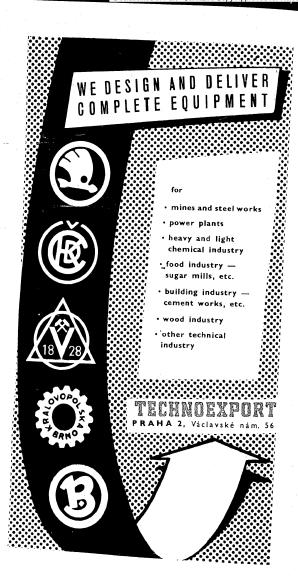
# PragoExport

Tailors' Supplies and Slide Fasteners • Supplies for Bagmakers, Upholsterers and Shoemakers • Writing, Painting and Office Supplies, Office Organization Aids of all kinds • Fancy Leather Ware, Paper and Fiber Trunks, Umbrellas, Hygienic and Surgical Rubber Goods • Fancy Goods of all kinds, Smokers' and Barbers' Untensils, Bast and Wickerware, Brushes of all kinds • Toys, Fishing Tackle and Sporting Goods • Buttons of all kinds, Artificial Flowers and Fruit • Needles of all kinds (handmachine-textile-upholsteres and shoemakers needles), Paper Spools, Shuttles and other Supplies for Textile Industry of all kinds, Laboratory Supplies and Controlling Instruments for Textile Industry

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# Prago-Export

PRAHA, CZECHOSLOVAKIA



03/080

#### Full-Weight Relief (Safety) Valve, Spring Type,

Nominal Pressure 40 kg/sq. cm (600 lb/sq. in.), angle-type, flanged, double; two self-acting relief valves with common inlet and outlet. For steam, air and gases and pressures of 40 kg/sq. cm (600 lb /sq. in.) at a maximum temperature of 300 °C (572 °F).

STROJEXPORT

#### High-Speed Relief (Safety) Valve with Cooling Cover,

Nominal Pressure 250 kg/sq. cm (3500 lb/sq. in.), spring- and angle-type. The cooling extension protects the spring against excessive heat. The design enables rapid opening and draining of an adequate quantity of liquid. Suitable for adequate quantity of liquid. Suitable for higher temperatures of steam boilers and pressures up to 125 kg/sq. cm. (1750 lb/sq. in.) at a maximum temperature of 500 °C (932 °F). STROJEXPORT

#### 03/081 Reducing Valve, Steam Loaded,

Nominal Pressure 25 kg/sq. cm (350 lb/sq. in.), with straight regulation, directly with diaphragm steam load. Suirectly with diaphragm steam load. Suttable for reducing the pressure of steam and non-aggressive gases, for 25 kg/sq. cm (350 lb/sq. in.) at a maximum temperature of 400 °C (752 °F).

STROJEXPORT

#### 03/082 Reducing Valve, Spring Loaded,

direct regulation, straight, with two seats and metal diaphragms. Designed for reducing steam and gas pressures to 125 kg/sq. cm (1750 lb/sq. in.) and a maximum temperature of 400 °C (752 °F). Typified valve for blowing boilers at a reduced pressure of 15 to 25. kg/sq. cm (220 to 350 lb/sq. in.). STROJEXPORT

### Relief Valve, Diaphragm Type,

Rener vaive, Diaphragni 1996, Nominal Pressure 16 kg/sq. cm (250 lb/sq. in.), with direct regulation and spring load. Suitable for reducing steam and gas pressures to 16 kg/sq. cm (250 lb/sq. in.) at a maximum temperature of 200 °C (392 °F). STROJEXPORT

#### 03/084

#### Reducing Valve,

Nominal Pressure 64 kg/sq. cm (900

lb/sq.in.), with direct regulation, straight pistontype, two seats with adjustable weight. Suitable for reducing steam or gas pressure to 64 kg/sq. cm (900 lb/sq. in.) at a temperature of 400  $^{\circ}$ C (752  $^{\circ}$ F). STROJEXPORT STROJEXPORT

#### 03/085

#### Lever Loaded Safety Valve,

with indirect regulation, straight, one seat. Operated by an automatic, hydraulic, lever type pressure cylinder, controlled by a pressure regulator, or handwheel. Suitable for reducing steam or gas pressures to 100 kg/sg cm (1400 or gas pressures to 100 kg/sq. cm (1400 lb/sq. in.) at a temperature of 400 °C (752 °F). STROJEXPORT STROJEXPORT

#### 03/086 Lever Loaded Safety Valve, Double Seat Type,

straight, with indirect regulation and straight, with indirect regulation and two seats. Operated by an automatic, hydraulic, lever type pressure cylinder, controlled by a pressure regulator, or handwheel. Suitable for reducing steam and pas pressures to 100 kg/sq. cm (1400 lb/sq. in.) at a temperature of 400 °C (752 °F). STROJEXPORT

#### 03/087

#### Reducing Station

for reducing steam at a rate of Q = 6.5tons/hr. at a pressure of 16 kg/sq. cm (230 lb/sq. in.) to 12 kg/sq. cm (178 lb/sq.) and from a temperature of 380 °C (716 °F) to 200 °C (932 °F). A complete functional mechanism including automatic oil regulation ding automatic oil regulation.

STROJEXPORT

#### 03/088 Blow-Off Valve,

Nominal Pressure 100 kg/sq. cm (1400 lb/sq. in.), flanged, angle-type with renewable seat and disk. Used for interrupted blow-off of steam boilers at various working pressures.

#### . STROJEXPORŤ

#### 03/089 Blow-Off Valve

Blow-UII Vaive

Nominal Pressure 160 kg/sq. cm (2300 lb/sq. in.), nominal sizes 15, 25 and 40 mm (½, 1 and 1½"); flanged and welded-on type. The valve is opened and closed by means of a large hand-wheel. By applying a small handwheel, impurities from the seating surfaces are eliminated.

STROUGENORM. eliminated. STROJEXPORT

#### 03/090 Blow-Down Valve,

straight, flanged type, with renewable seat. It serves for permanent blowdown of steam boilers. The lift can be edited as the distance of the straight of the service of th adjusted on the dial. STROJEXPORT

#### 03/091 Blow-Down Valve,

Nominal Pressure 250 kg/sq. cm (3500 lb/sq. in.), flanged or welded-on type. The maximum drained quantity is determined by means of the pointer, fitted to the stem in accordance with the indicated lift. STROJEXPORT

#### 03/092 Steam Valve,

Nominal Pressure 250 kg/sq. cm (3500 lb/sq. in.), flanged, designed for steam condensation. STROJEXPORT

#### 03/093

### Steam Valve - Gate Valve Type

The gate valve closure is controlled by a ball plunger. It is used for automatic draining of condensate from horizontal piping. Manufactured for nominal pressures of 16, 25, 40 and 100.

STROJEXPORI

#### 03/094

### High-Pressure Steam Valve

High-Pressure Steam Vaive
provided with pressure sealing cover.
The valve closure is controlled by
means of a bell type plunger. The valve
is used for draining condensate from
horizontal piping at nominal pressures
of 160 and 250 kg/sq. cm (2300 and 3500
lb/sq.in.) and a temperature of 550 °C
(1022 °F). It is fitted with a deaerating
valve.

STROJEXPORI

### 03/095

#### Swing Check-Valve

avoids return movement of steam in avoids return movement of steam in the piping. Flanged, larger nominal sizes supplied with by-pass. Available for nominal pressures of 10, 16, 25, 40, 64, 100 kg/sq. cm (150, 250, 350, 600, 900, 1400 lb/sq. in.). Made of cast-iron, cast-steel or stainless steel. STROJEXPORT

### 03/096

### Sealing Compensator

designed for adjusting mechanical or thermal pipe dilation. Available for nominal pressures of 10, 16, 25 and 40

kg/sq. cm (150, 230, 350 and 600 lb/sq.in.) kg/sq. cm (150, 230, 350 and 600 lb/sq. in.) in sizes of 40 to 700 mm (1½ to 28 ln.) of cast-iron (nom. pressures of 10, 16 kg/sq. cm - 150, 230 lb/sq. in.) and sizes of 40 to 500 mm (1½ to 20 in.) of cast-steel (nom. pressures of 16, 25, 40 kg/sq. cm - 230, 350, 600 lb/sq. in.). STROJEXPORT

#### 03/097 High-Pressure Water Gauge 'Glas-Mica"

for steam generators up to an over-pressure of 90 kg/sq. cm (1350 lb/sq. in.). Relief glass. STROJEXPORT

#### High-Pressure Water Gauge "Glas-Mica" - Relieved

for steam generators up to an over-pressure of 125 kg/sq. cm (1750 lb/sq. in.). By means of a holder of special design, absolutely uniform stress on glass during operation is ensured. Relief glass. STROJEXPORT

#### 03/099

### Long Distance Liquid Level Gauge

Auxiliary gauge, remote controlled from the boiler drum. Maximum working overpressure 125 kg/sq. cm (1750 lb/sq. in.). Mounted between the direct water gauge and connecting flanges.

### STROJEXPORT Reflexion Water Level Indicator

Nominal Pressure 40 kg/sq. cm (600 lb/sq. in.), for steam boilers, inclinable, provided with high-speed valves and deslagging valve. deslagging valve. STROJEXPORT

#### 03/101 Feed Valve,

Nominal Pressure 64 kg/sq. cm (900 lb/sq. in.) and a maximum temperature of 300 °C (572 °F). Automatic regulation STROJEXPORT

#### 03/102 Feed Valve,

Nominal Pressure 160 kg/sq. cm (2500 lb/sq. in.), with two seats and regulation holes. The valve controle the supply of boiler feed-water up to a pressure of 160 kg/sq. cm (2300 lb/sq. in.) and a maximum temperature of 300 °C (572° F). Automatic regulation.

\*\*STROJEXPORT\*\*

STROJEXPORT

### MECHANIZED CONTROL OF VALVES

#### 03/103 Globe Valve

Nominal Pressure 40 kg/sq cm (600 lb/sq. in.), straight, flanged type. It is provided with P 500 (P 2000) straightprovided with P 500 (P 2000) straight-lined electric drive and standard accessories. Suitable for water, steam and gases in inaccessible places, or for remote control. STROJEXPORT

#### 03/104 Gate Valve with Electric Drive

designed for inaccessible places where mechanized control from one point is required. Available for pressures of 6, 10, 16, 25, 40, 64 and 100 kg/sq. cm (85, 150, 230, 350, 600, 900 and 1400 lb/sq. in.) in all nominal sizes. Including standard accessories for a. c.

#### STROJEXPORT 03/105

#### Gate Valve with Electric Drive

Nominal Pressure 6 kg/sq. cm (85 lb/sq. in.), for cold or hot water. lowpressure steam and gases. Supplied with electrical equipment for a. c. STROJEXPORT

#### 03/106 Gate Valve - Yoke Type with Electric Drive

and Cleaning Cover, Nominal Pressure 10 kg/sq. cm (150 lb/sq. in.) designed for impure water, liquids and gases with sedimenting compounds. Available with headwhool for water control reputal. handwheel, for remote control, manual or mechanized electric drive.

STROJEXPORT

#### 03/107 Hydraulic Gate Valve

designed, above all, for water-works, for mechanized or remote control. Available for 6, 10, 16 kg/sq. cm (85, 150, 230 lb/sq. in.) in sizes of 80 to 1200 (3 to 48 in.). The valve is held in position by means of a locking lever.

STROJEXPORT

#### Stand for Remote Control of Valves

Supplied with 25 kgm or 50 kgm electric drive for a. c. voltages of  $3\!\times\!220/$ 

380 V, 3×500 V, for valves with handwheel or electric by-pass control or without by-pass. STROJEXPORT



03/104

#### 03/109

### Straight Globe Valve of Stainless

flanged, yoke type with rising stem. Suitable for aggressive liquid and gases up to pressures of 16 and 40 kg/sq. cm (230 and 350 lb/sq. in.) and a maximum temperature of 300 °C (572 °F).

STROJEXPORT

#### 03/110

### Straight Globe Valve of Stainless

Nominal Pressure 16 kg/sq. cm (230 lb/sq. in.), flanged, yoke type, for chemically active chemicals, especially used in the food industry. STROJEXPORT

### VALVES FOR CHEMICALS

#### 03/111 Straight Globe Valve of Non-Ferrous Metals

flanged, yoke type with rising stem (spindle) and handwheel. Suitable for slightly aggressive liquid up to a pressure of 16 kg/sq. cm (230 lb/sq. in.) and a temperature of 200 °C (392 °F).

STROJEXPORT.

### Straight Globe Valve for Ammonia

Nominal Pressure 25 kg/sq. cm (350 lb/sq. in.), flange type, with rising stem (spindle) and inside screw, handwheel controlled. Suitable for liquid ammonia and ammonia gas. Up to nominal size 50 they are produced forged.

STROJEXPOR1

#### 03/113 Angle-Type Globe Valve for Ammonia

03/112

Nominal Pressure 25 kg/sq. cm (350 Hominai Fressure 20 Ag/sq. City (600 lb/sq. in.), flanged, with rising stem (spindle) and inside screw. Suitable for to a size of 50 mm (2") forged, larger nominal sizes are made of cast-steel. STROJEXPORT

#### Straight Non-Return Valve for Ammonia

Nominal Pressure 25 kg/sq. cm (550 lb/sq. in.), flanged with cover. It eliminates automatically return-flow. Caststeel, suitable for liquid ammonia and ammonia gas.

STROJEXPORT

#### Angle-Type Non-Return Valve for Ammonia

Nominal Pressure 25 kg/sq. cm (350 lb/sq. in.),flanged with cover. Returnflow is automatically eliminated. Caststeel. Suitable for liquid ammonia and ammonia gas.

STROJEXPORT

#### 03/116 Straight Regulation Valve for Ammonia

Nominal Pressure 25 kg/sq. cm (350 lb/sq. in.), flanged, with rising stem (spindle) and inside screw, handwheel

controlled. Suitable for liquid ammonia and ammonia gas.

#### 03/117 Sample Valve

Nominal Pressure 40 kg/sq. cm (600 stem, moving cone. It is intended for the flux of aggressive materials.

#### STROJEXPORT 03/118 "Y" Valve of Stainless Steel

straight, flanged type with rising stem straight, lianged type with rising stem and handwheel. Suitable for aggressive liquids and gases up to a pressure of 16 kg/sq. cm (250 lb/sq. in.) and a tem-perature of 300° C(572°F).

STROJEXPORT

## "Y" Valve, Rubber-Lined

flanged, yoke type with rising stationary stem (spindle) and handwheel. All surfaces which are in contact with the properties of the liquid. Suitable for chemicals, such as concentrated acids STROJEXPORT

#### 03/120 Straight Non-Return Valve of Stainless Steel

flanged. Return-flow is automatically Hanged. Return-flow is automatically avoided. The valve is designed for aggressive liquids and gases up to 16 or 40 kg/sq. cm (230 or 350 lb/sq. cm) and a temperature of 300 °C (572°F). Straight or angle-type. STROJEXPORT

#### 03/121 Head Gate Valve

Nominal Size 15 up to 50 mm (1/2 to 2"), screw or flange type, for nominal pressures of 6, 10, 16 and 25 kg/sq. cm (85, 150, 250 and 350 lb/sq. in.). The valve is made of cast-iron or non-ferrous metals. It is guitable for both or rous metals. It is suitable for hot or cold water, liquids and gases.

STROJEXPORI

#### 03/122

## Welded Gate Valve, Yoke Type

Nominal Pressure 16 kg/sq. cm (230 lb./sq. in.). The valve is a prototype of economic design. The split wedge on the ball ensures the reliability of the closure. STROJEXPORT

#### 03/123 Gate Valve for Thick Liquids

Nominal Pressure 2.5 kg/sq. cm (35 lb/sq. in.), double, flat, yoke type with knife cover plate. The valve is entirely made of non-ferrous metals. It is suitable for viscous and thick liquids with small particles of impurities or dissolved materials up to a working over-pressure of 2.5 kg/sq. cm (35 ib/sq. in.) and a temperature of 150 °C (302 °F). STROJEXPORT

#### 03/124 Gate Valve for Thick Liquids

Nominal Pressure 6 kg/sq. cm (85 lb/sq. in.), flanged, plate type, with one side sealing only. Nominal sizes 80 to 250 kg/sq.cm (1200 to3500 lb/sq. in.), with rising stm, handwheel operated. Suitable for thick materials up to a working over-pressure of 6 kg/sq. cm (85 lb/sq in.) and a temperature (217 °F). 120 °C STROJEXPORT

#### 03/125 Rubber-Lined Gate Valve

Nominal Presure 6 kg/sq.cm (85 lb/sq. in.), designed for chemicals, i.e. acids and lyes. All surfaces which are in contact with the liquids, are rubberlined. STROJEXPORT

#### 03/126

### Rubber-Lined Gate Valve

Nominal Pressure 10 kg/sq. cm (150 lb/sq. in.), seeabove. STROJEXPORT

#### 03/127 Relief (Safety) Valve of Stainless Steel

Nominal Pressure 16 kg/sq. cm (230 lb/sq.in.), low-weight, spring, angle-ty-pe with relief lever. Suitable for aggressive liquids, vapours and gases up to pressure of 13 kg/sq. cm (192 lb/sq.in.) and maximum temperature of 200 °C (392 °F). STROJEXPORT

#### 03/128 Stuffing Cock

Nominal Pressure 16 kg/sq. cm (230 lb/sq. in.), flanged, straight or tree-way type (T or L section) in sizes of 15 to 150 mm (½ to 6 in.) for nominal press-

ures of 6, 10 and 16 kg/sq. cm 85, 150 230 lb/sq. in.). Suitable for liquids, vapours and gases. Designed to improve the sealing. Executed of cast iron as well as non-ferrous metals.

STROJEXPORT

### 03/129

### Stuffing Cock

Nominal Pressure 10 kg/sq. cm (150 lb/sq. in.), made of stainless steels. Flanged, straight or three-way type (T or L sections) in sizes of 15 to 150 mm (1/2 to 6 in.). Suitable for aggressive STROJEXPORT chemicals.

#### 03/130

#### Cock with Heating Jacket

Nominal Pressure 10 kg/sq. cm (150 lb/q. in.), flanged, straight or three-way type with T section. Steam or oil of a maximum temperature of 150 °C (502 °F) and 2.5 kg/sq.cm (35 lb/sq.in.) pressure, passes through the heating jacket. Suitable for solidifying materials up to a pressure of 10 kg/sq. cm (150 lb/sq. in.) and a maximum temperature of 200 °C (392 °F). STROJEXPORT

#### 03/131 Cock with Relief Disk (Cone)

Nominal Pressure 25 kg/sq. cm (350 Nominal Pressure 25 kg/sq. cm (550 lb/sq. in.). Before adjusting the disk, it is lifted by means of the lever. After setting the desired opening position, the disk is pressed again into the body. Available in straight, or flange type, for agressive liquids of various concentration. STROJEXPORT

#### 03/132

#### Horizontal Sight-Window

Nominal Pressure 16 kg/sq. cm (230 lb/sq. in.), made of non-ferrous metals. By means of the sight-window, the condition or flow of less agressive liquids are ascertained. Maximum pressure 16 kg/sq.cm (230 lb/sq.in.). Flanged, with two sight-glasses.

STROJEXPORT

#### 03/133 Horizontal Sight-Window

Nominal Pressure 16 kg/sq. cm (85 lb/sq. in.), made of aluminium. By means of this sight-window, the condition or flow of less aggressive liquids is ascertained to a maximum pressure of 6 kg/sq.cm (85 lb/sq.in.).

STROJEXPORT

#### 03/134 Horizontal Sight-Window

Nominal Pressure 16 kg/sq. cm (230 lb/sq. in.), made of stailess steel. By means of this sight-window, the condition or flow of aggressive liquids up to a maximum pressure of 16 kg/sq. cm (230 lb/sq. in.) are ascertained.

STROJEXPORT

#### 03/135 Vertical Sight-Window

Nominal Pressure 16 kg/sq. cm (230 lb/sq. in.), made of cast-iron. The inner surfaces are rubber-lined to resist con-centrated acids and lyes.

STROJEXPORT

#### 03/136 Level Gauge with Valve Heads

Nominal Pressure 16 kg/sq. cm (230 lb/sq. in.), made of stainless steel, with protective tube. Suitable for chemicals, STROJEXPORT

#### 03/137

Level Gauge with Cock-Stuffing Heads

Nominal Pressure 16 kg/sq. cm (230 lb/sq. in.), made of broze, with protective tube. Suitable for liquids, chemiccally active. STROJEXPORT

### MISCELLANEOUS VALVES

#### 03/138 Globe Valve

Yoke Type, Nominal Pressure 16 kg/sq. cm (230 lb/sq. in.), straight, flanged with rotating stem and handwheel. Suitable for cold or hot water, steam and gases up to 16 kg/sq. cm (230 lb/sq. in.) and a maximum temperature of 200 °C (392 °F). Angle-type valves and with regulation disk are also supplied.

STROJEXPORT

STROJEXPORT

STROJEXPORT

#### Straight Non-Return Valve

Nominal Pressure 16 kg/sq. cm (230 Nominal Pressure 10 kg/sq. cm (230 lb/sq. in.), flange type. Return-flow is automatically avoided. Suitable for water, liquids, steam and gases up to a temperature of 200 °C (392 °F). Also available for higher nominal pressures. STROJEXPORT

### 03/140

03/139

Non-Return Valve, Angle-Type

Nominal Pressure 16 kg/sq. cm (230 lb/sq. in.), flange type. Return-flow is automatically avoided. Suitable for water, liquids, steam and gases up to a temperature of 200 °C (392 °F).

#### 03/141

### Globe Valve, Cross-Type

Nominal Pressure 40 kg/sq. cm (600 lb/sq.in.), fianged, yoke- and three-way-type, with handwheel. When opened, the liquid is divided into the two outlets. Suitable for water, liquids, steam and gases.

STROJEXPORT

#### 03/142 Gate Valve, Yoke Type, for Hot Crude Oil

Nominal Pressure 16 kg/sq. cm (250 lb/sq. in.). The valve finds use in oil refineries. Carbon steel, alloy-or stainless-steel. STROJEXPORT

#### 03/143

### Gate Valve for Hot Crude Oil

Nominal Pressure 40 kg/sq. cm (600 lb/sq. in.), cylindrical, flanged, with fixed wedge, yoke type with handwheel. Manufactured in carbon, alloy or stainless steel. STROJEXPORT

### Gate Valve for Hot Crude Oil

Nominal Pressure 160 kg/sq. cm (2300 Nonman rressure 100 kg/sq. cm (2000 lb/sq. in.), cylindrical, flanged, with fixed wedge, yoke type with handwheel. Up to 450 °C (842 °F), the wedges and seats are not welded-on. Manufactured in carbon allow or activities the circumstance. in carbon, alloy or stainless steel.

STROJEXPORT

### 03/145

Crude Oil Gate Valve, Flanged Especially robust design, cast-steel.

Designed for deep bores, oil pipe lines,

Designed for deep bores, oil pipe lines, flushing water and natural gases. Manufactured for the maximum permitted overpressures of 50, 70, 105 and 350 kg/cm<sup>2</sup>. STROJEXPORT

#### 03/146

### Crude Oil Gate Valve, Screwed Type

Especially robust design, cast-steel. Designed for deep bores, oil pipe lines,

flushing water and natural gases. Range of pressures same as in No 03/145. STROJEXPORT

#### 03/147 Cast-Iron Gate Valve

Nominal Pressure 6 kg/sq. cm (85 lb/sq. in.), flanged, flat, with fixed wedge. Suitable for cold or hot water, lowpressure steam and gases STROJEXPORT

#### 03/148

#### Cast-Iron Gate Valve

03/149

Nominal Pressure 10 kg/sq. cm (150 lb/sq. in.), flanged, oval, with fixed wed-ge. Suitable for cold or hot water, lowpressure steam and gases

#### STROJEXPORT

#### Relief (Safety) Valve, Low Weight, Spring Type

flange-type, pressure-sealed. Suitable for steam, air and gases up to 16 kg/sq. cm (230 lb/sq. in.) and a maximum temperature of 350  $^{\circ}\mathrm{C}$  (630  $^{\circ}\mathrm{F}$ ).

#### STROJEXPORT

#### 03/150 Relief (Safety) Valve, Low Weight, Spring Type

Nominal Pressure 40 kg/sq. cm (600 lb/sq. in.), angle-type, flanged, with covered spring and relieving lever. Suitable for water, steam, air and gases up to 40 kg/sq. cm (600 lb/sq. in.) and a temperature of 300 °C (572 °F).

#### STRÓJEXPORT

#### 03/151 High-Speed Relief (Safety) Valve

Nominal Pressure 40 kg/sq. cm (600 Nominal Pressure 40 kg/sq. cm (600 lb/sq. in.)\*spring-, angle-type, flanged. The design of this valve enables its rapid opening and the draining of an adequate quantity of the liquid. Suitable for steam boilers up to a pressure of 40 kg/sq. cm (600 lb/sq. in.) and a temperature of 300 °C (572 °F).

#### STROJEXPORT

#### 03/152 Reducing Valve with Direct Regulation

Nominal Pressure 16 kg/sq. cm (230 lb/sq. in.), straight, with diaphragm and spring load. Designed for reducingt water pressure to 16 kg/sq. cm (230 lb/sq. in.) and temperature to 50°C (122°F).

STROJEXPORT

#### 03/153

### By-Pass Valve, Diaphragm Type

Nominal Pressure 16 kg/sq. cm (250 lb. sq. in.), straight, spring loaded with double relieved disk. The rubber diaphragm is protected by a water column against higher temperatures of liquids. Suitable for liquids, steam and gases from the lowest opening pressures up to 6 kg/sq. cm (85 lb/sq. in.) and a temperature of 300 °C (572 °F).

#### STROJEXPORT 03/154

#### Two-Stage Relief Valve

The valve closes the pipe in case of breakdown. It is actuated by impulses

breakdown. It is actuated by impulses from the pipe where the pressure has been increased or reduced. It finds use with pipes for all kinds of gases and air up to maximum permissible working overpressure of 13 kg per sq. cm and a temperature of 30 °C. STROJEXPORT

#### Non-Return Butterfly Valve, 800 in dia.

The valve is used with pumps and various installations for a maximum working overpressure of 2,5 kg per sq. cm, and a temperature of 100 °C.

#### STROJEXPORT 03/156

#### Reflex Valve Water Gauge, 25 in dia.

The valve finds use with fuel tanks, 1200 mm long. It is also produced with a double holder for a length of 4500 mm.

STROJEXPORT

#### Oil Economy for ČKD Transformers

serves for cleaning or regeneration of transformer oil. It is installed in BAI express train carrlages, and contains:
a) 1 vaccum filter

- a) 1 vaccin litter

  c) 1 double regenerating plant
  c) 1 control panel
  d) Pumps
  e) 2 manipulating tanks f) Auxiliary equipment STROJEXPORT

#### 03/158

#### Precision Reduction Valve

for wet and overheated steam, mercury regulated, for any pressure or temperature, used for gasses and air.

#### MACHINES FOR THE CHEMICAL 04 INDUSTRY

#### 04/001 Spiral Heat Exchanger, Type K-K

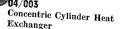
The machine is used for gases and liquids in the chemical industry. It is suitable for undertakings where small size and relatively highly efficient exchangers are required. Heat exchanger surfaces: 30 sq.metres. The liquid is in both sections of the exchanger. Working pressure: 3 atm of both sections of the eaching ing pressure: 3 atm. g.

TECHNOEXPORT

#### 04/002 High-Pressure Exchanger, 110 sq.m.

110 sq.m.

The exchanger is a part of the equipment for the production of ethanol. It is of tubular type with a floating head. The shell, 870 mm. in outer diameter, is electrically welded of two parts, and has one inlet and one outlet neck. The channel cover is on the other end of the shed. The tube sheet of the exchanger tube bundle is fitted between the flanges of the sheel and the channel cover. The tube bundle is rolled in two cover. The tube bundle is rolled in two tube sheets. TECHNOEXPORT



Exchanger

The surface of the exchanger consists of a system of vertical cylinders which are inserted concentrically into one another. Since their diameters are graded, an intercircular space is formed between the cylinders. The exchanger finds a wide field of application, especially in the chemical industry for "liquid" or "gas-gas"; it can also be used as an evaporator heating element or vapour condenser. Surface: 16 sq. metres. Overpressure: 6 atm. Weight: 670 kg.

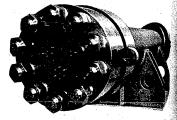
\*\*TECHNOEXPORT\*\*

#### 04/004

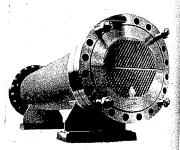
Combined Heater and Exchanger, 100,000 keal/hr.

A water heater with sludge exchanger.

Advantages: Easy essembly, safety in operation, higher output per unit of TECHNOEXPORT



04/002



04/002

#### 04/005-009 Dry Rotary Low-Pressure Gas Meter

Meter
The gas meter measures the quantity of gas manufactured in gasworks as well as the demand of gas in all fields of industry. Sizes: 2000 cu. metres per hour, 700 cu. metres per hour, 450 cu. metres per hour or 300 cu. metres per hour.

TECHNOEXPORT

### Autoclave

The autoclave is used for chemical reactions under pressure in various protective surroundings. Capacity: 3000 litres. Working pressure: 25 atm. g.

\*\*TECHNOEXPORT\*\*

### Drum Type Chamber Filter

The drum type chamber filter is used the drum type chamber litter is used chiefly for the densification, dehydration and washing of cellulose. It is a rotary, drum type chamber filter for continuous operation. Capacity: 140 TECHNOEXPORT tons/24 hours.

#### 04/012 Electrostatic Separator

The electrostatic separator is used for the condensation of fine particles of tar in coal gas, coke gas, etc. Capacity: 1000 cu. metres per hour. Efficiency: up to 99.9 p. c. TECHNOEXPORT

#### 04/013 Stream Gas Washer

The washer consists of a jet, diffusor, stream filter, injector and auxiliary attachments (pump, fan). It cleans producer gas. It is made of steel plate, 4 mm. thick. Quantity of gas: 5000 cu. metres per hour. Gas temperature: 55 °C. Concentration of gas contamination: 0.4 to 0.7 gr./cu. metre.

TECHNOEXPORT

#### 04/016 Catalytic Purifier

The purifier is a high-pressure forged body from a cylindrical shell. TECHNOEXPORT

#### 04/017 Wound Scrubber

The apparatus serves for separating some elements of the gas mixture by means of a liquid absorbent of instance for the elimination of carbon dioxide in syn-gas by means of ammonia water. TECHNOEXPORT

#### 04/018 Water Treating Unit

Capacity: 2 litres per sec. The unit which is of compact design, ensures continuous supply of drinking water at a rate of 2 litres per sec. It consists of a flanker, sandfilter, diluting tanks, a measuring pump and two centrifugal pumps for priming and repumping water.

TECHNOEXPORT

#### 04/019

Hydrocyclons for sorting fine and coarse solid fractions in liquids  $C\bar{E}RAMICS$ 

#### 04/020 Various Basalt Hollow Blocks

Arch, combined arch, sewage pipes, Y and T pieces, used for hydralic or pneumatic conveyance of hard and sharp materials and in acid environment. CERAMICS

#### 04/021 Various Castings, Hollow Blocks aud Floor-Tiles

A part of the lining of a rotary tube mill for grinding cement, ceramic raw materials, etc. CERAMICS



04/022

#### 04/022 Laminated Pipes

Sections of pipes of various diameters and wall-thicknesses, including fittings, designed to meet the pressure and operating requirements.

#### 04/023 Pressure Filter

suitable for filtering arsenic acid, boracic acid and ethyl alcohol. Working pressure in the filter: up to 5 atm. Approximate working temperature: 200 °C. The welded filter is provided with a removable cover, to which the mixing equipment is attached. Weight: 4250 kg. TECHNOEXPORT

#### 04/025 **Extraction Column**

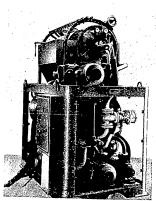
The extraction column 1000 is a verti-The extraction column 1000 is a vertical cylindrical vessel with a deep arched bottom. Inside the column are 15 trays on welded angular rings. The trays are divided into sections which can be extracted through four manholes, 500 mm. in dia., welded to the shell. It finds use in the selective refining process of mineral oils. TECHNOEXPORT

#### 04/026 Laboratory Filter 3 KT 1

The laboratory filter is used in the chemical, food, cellulose or pharmaceutical industries.

Continuous filtration finds a wide field of application, to-day, in industries

where the solid phase has to be separated from the liquid phase. Filtering area: 0.1 sq. metre. Weight: 36.5 kg. TECHNOEXPORT



#### FOUNDRIES AND FOUNDRY 05 EQUIPMENT

#### 05/001 Die-Casting Machine CLP 8515-2

The machine is suitable for working up The machine is suitable for working up zinc, aluminium, copper, magnesium and other alloys of non-ferrous metals up to 0.60 kg. (aluminium alloys), 1.60 kg (zinc alloys) and 1.25 kg. copper alloys) in weight. Fully hydraulic control. Average output: 100—200 operations per hour. Maximum die-closing force: 85,000 kg. Weight: 3,000 kg. STROJEXPORT

#### 05/002 Pressure Die-Casting Machine CLP 500.70

The machine is suitable for working up aluminium, magnesium, zinc, copper and other alloys of metals with a cast-

and other alloys of metals with a casting temperature believe 1000°C and about 12 kg. in weight.

Fully hydraulic control. The machine is provided with RP 30 pump with a capacity of 100 litres per min. at a pressure of 120 atm., and AK 7.5 hydropneu-

matic accumulator of 750 litre capacity. Output: 10 to 50 operations per hour. Weight: 22,500 kg. STROJEXPORT

### Semi-Automatic Pressure Die-Casting Machine CLP 180.30

The machine is suitable for working up aluminium, zinc, copper, magnesium and other alloys of nonferrous metals. Die-closing force: 180 tons. Pressure:

Semi-automatic control, i. e. the working cycle is automatic until the die is opened. STROJEXPORT

#### 05/004 Mobile Foundry Screen SSP 60

used for screening smaller quantities of sand. The machine can be transpor-ted. The vibrating movement is obtai-ned by means of weights, eccentrically mounted on a disc which is carried at the end of the driving shaft. Height:

1630 mm. Electric motor: 1.1 kW, 900 r. p. m. Approximate output: 1.5 cu. metre per hour. Approximate TECHNOEXPORT 90 kg.

#### 05/005 Oscillating Grinder KB 40

The machine serves for surface machining of steel castings. It is especially suitable for removing seams in the joints of castings, slag on billets as well Johns of castings, slag of binders as well as for grinding the flaws of castings. Two electric motors: 2 kW, 2810 r. p. m. Grinding wheel dia.: 400/50×153 mm. Maximum peripheral speed of grinding wheel: 45 metres per sec. Approximate weight: 280 kg.

\*\*TECHNOEXPORT\*\* weight: 280 kg.

#### 05/006 Grinder SB 75

The machine is intended for grinding medium heavy castings. Easy renewal of Vee-belts. Improved exhaust. Two grinding wheels, 750/305×80 mm.in. dia. 2 electr. motors, 7.5 kW, 1440 r. p. m. Maximum peripheral speed of grinding wheels: 45 metres per sec. Approximate weight: 1650 kg.

TECHNOEXPORT

## Jarring Machine ISS 1-P

with moulding box lifting mechanism for the manufacture of sand moulds. The jar ram moulding mechanism ensures perfect thickening of the sand in the box and danmps the impacts on the base. Clamping pressure: 4000 kg. Weight: 1300 kg. TECHNOEXPORT

#### 05/008 Jet Sand Blasting Machine TS 2000.1

with work table. This machine is designed for cleaning castings and suitable forgings up to 35 kg. in weight. The machine does not require a special foundation with assembly holes. Diameter of rotary table: 2000 mm. Weight: 3250 kg. TECHNOEXPORT

#### 05/009 Pneumatic Upsetting Machine

designed to speed up the foundry forming operations. Five types are available.

P1 P2 P3 P4 P5 240 460 700 1300 900 mm. Weight 2.5 5 5.5 6 8 kg. TECHNOEXPORT

#### 05/010 Revolving Furnace

for all types of heat treatment. Outfor all types of heat treatment. Output: 1000 kg. per hour. Useful working space: 2700 in dia. Width of Turnace hearth: 850. Maximum height: 475. Output: 500 kg./hr. Useful working space: 2150 in dia. Width of Turnace hearth: 650. Maximum height: 400. Maximum temperature: 1000 °C. Speed of the machine: 1 to 4/hr. Output of electric motor: 2.2 kW. Weight of Turnace: 25.000 kg. STROLEXPORT nace: 23,000 kg. STROJEXPORT

#### 05/011 Model of a Steel Foundry

Capacity: 9000 tons of castings per a. at 2.2 shifts. Maximum weight of casting: 1500 kg. 90 p. c. of castings are machine-made, 60 p. c. are made in the raw state. Two electric melting cupola furnace, one induction furnace TECHNOEXPORT

#### 05/012 Forge and Pressing Shop Model

Capacity: 38,000 tons of forgings and pressings per a. at 2.3 shifts, i. e. forgings up to 700 kg. in weight die forgings up to 80 in weight hot or cold treated pressings of sheets and wide treated pressings of sheets and TECHNOEXPORT steels.

#### 05/014 Injection Burners

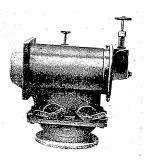
By means of these burners the kinetic energy of pressure gas is utilized and a perfect mix for all kinds of clean gases is obtained.

STROJEXPORT

#### **05/015** Universal Turbulence Gas Burner

for the combustion of all low-pressure gases, cleaned or not cleaned STROJEXPORT





#### 05/016 Heating Oil Burner

for thin liquid types of heating oils, for use with heating plants operating under higher temperatures. STROJEXPORT

#### 05/017 Advanced Casting Methods Refined 06 Silicon Cast-Iron

#### Rational Production of Precision Castings into chemically treated moulds

The setting of the moulding machine ensures the manufacture of perfect moulds from chemically treated sands which are suitable for the production of light precision castings.

#### Core Blasting from Chemically Treated Sands

The chemically treated sands are especially suitable for core blasting.

# Casting of a Dredger Swing Superstructure

made by means of CT sand. The casting is 5200 kg. in weight. By means of the chemically treated mixture economies of 20 p. c. have been obtained.

#### Exothermic Linings of Risers

are designed to increase the temperature of the metal so that steel can be utilized by 75 to 85 p. c. or even more. The recommended mixtures react slowly, with a delay of about 10, 60 or 100 seconds

### Chill Moulding Mixtures

are superior to pulverized resin mix-

### Czechoslovak Moulding Sands

their qualities, geological origin and geographical position of the beds. The applicability of the various kinds of these sands to the individual metals is demonstrated.

STROJEXPORT

# CZECHOSLOVAK HEAVY INDUSTRY

scientific and technical monthly for engineering and heavy industry

#### 06 FORMING MACHINES

#### 06/001 Straight-Sided Deep Throated Press especially designed for blanking operations in multiple part production

Rated presure 10 tons
Stroke 8 to 60 mm.
Throat 140 mm.
Distance between columns 180 mm.
Dimensions of table 280X-400 mm.
Output of electric motor 1.1 kW

860 kg.
STROJEXPORT

#### 06/003

Weight

## Gap Frame Eccentric Press with fixed table LE 250

for heavy blanking, cutting, bending as well as shallow drawing work.

STROJEXPORT

### 06/005

#### Straight-Sided Crank Press LTL 160/1100

this machine is suitable for drawing guards, doors and other parts of motor car bodies, as well as fuel tanks, brake drums of disc wheels and kitchenware.

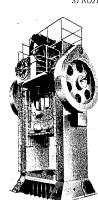
Rated pressure of ram
25 mm. before the lower dead point
Clear width below guideways.
Maximum drawing depth
Stroke of ram
Output of electric motor
Weight
STROLEXPORT

#### 06/002

#### Gap Frame Eccentric Press LE 100

is intended for blanking, cutting bending as well as shallow drawing work in multiple part production.

| Rated presure | 100 tons | 320 mm | Maximum distance ram table | 400 mm | 20 to 120 mm | 5100ke of ram | 900×640 mm | 7 kW | 5500 kg | 5TROLEXPORT



06/004

#### 06/004 Straight-Sided Crank Press LKT 250/160

intended for shallow drawing and blanking work in single or multiple part production, su h as drawing bonnets, doors and other parts of motor cur hodies, refrigerators, ranges, etc.

Rated presure
Stroke
Width of frame below
guideways
Dimensions of table
Output of electric motor
Weight

1600 mm. 1580'× 1150 mm. 28 kW 25 tons

250 1

STROJEXPORT

#### 06/006 Power Driven Curve Cutting Shears NOT 100/4

intended for cutting the irregular edges of parts produced by large drawing presses, such as mudguards, motor vehicle radiator parts, various motor vehicle body parts, such as window frames, doors, etc. It is also suitable for cutting curves and various shapes from metal sheets.

Radius 1000 mm.

Maximum thickness of steel cut of a tensile strength of 40 kg/sq. mm.

Output of electric motor 2550 kg.

STROJEXPORT

#### 06/007 Bending Machine XO 100/1

hand operated, suitable for use in tinsmith's shops and factories for the production of metalware, for simple bending of sheets up to a length of 1000 mm. and 1 mm. thickness. Various radii of bend are obtained by changing the bending bar of the upper bending cheek.

Bek.
Length of bend
Maximum thickness of
sheet of a tensile strength
of 40 kg/sp. mm.
Clear width between side
frames
Maximum stroke of upper
bending cheek
Weight
1 mm.
1070 mm.
80 mm.
115 kg.
STROIEXPORT

# 06/008 Three Roller Rounding Machine X Z M 200/2, power operated

intended for rounding cylindrical or tapered shapes and partial straightening of sheets. Especially suitable for the production of barrels, shells of boilers, flues, pipes, etc.

| Weight | Working length | Maximum thickness of rounded, sheet 30 kg/sp. mm. in tensile strength Minimum diameter of rounded cylinder | 112 mm. | 8.25 metres | 12000 kg. | 13000 kg. | 1

06/010 Friction Screw Forming Press LFK 400/700

intended for accurate work in forging dies as well as for calibrating, stam-

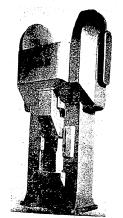
ping, straightening and bending operations. The force of blow is controlled by means of the program control equipment by adjusting the height of stroke according to the type of the forging.

ging.

Rated pressure
Maximum stroke
Clear width below
guideways
Output of electric motor
Weight

400,000 kg.
450 mm.
700 mm.
30 kW.
22,000 kg.

22,000 kg. STROJEXPORT



06/010

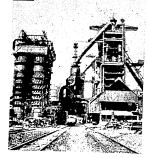
#### 06/011 Swaging Machine KRT 63

suitable for gauging and stepping solid or tubular material of large dimensions. The operation is fast without wastage in material.

Maximum diameter of solid material handled by hot swaging Maximum diameter of solid material handled by cold swaging Maximum diameter of utubular material handled by cold material handled han

You can obtain a general idea about the Czechoslovak engineering industry by subscribing regularly to the following magazines:

### CZECHOSLOVAK HEAVY INDUSTRY



#### CZECHOSLOVAK HEAVY INDUSTRY

which deals with the technical development and progress of the Czechoslovak engineering industry and contains highly technical articles by the foremost experts of the Czechoslovak heavy industry as well as numerous illustrations.

ISSUE: 12 copies annually in English, German, French, Russian and Spanish versions.

SUBSCRIPTION RATE: \$ 6 yearly (or in other foreign currencies).

#### KOVOEXPORT

which affords information about the technical development of metal products, viz. those of the radio engineering industry, telecommunication techniques, optical, medical and surgical instruments, graphical and textile machines, precision tools, etc.

ISSUE: 12 copies annually in an English version with a Spanish summary, and in a German version with Russian and French summaries.

SUBSCRIPTION RATE: \$ 4 yearly (or in other foreign currencies).



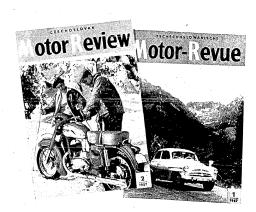
We recommend you to send your subscription to these magazines to the CZECHOSLOVAK CHAMBER OF COMMERCE Dept. of Technical Magazines, ULICE 28. ŘÍJNA 13, PRAHA 1 - CZECHOSLOVAKIA You can obtain a general idea about the Czechoslovak engineering industry by subscribing regularly to the following magazines:

#### CZECHOSLOVAK MOTOR REVIEW

which contains articles dealing with the technical advantages of motor vehicles of Czechoslovak make as well as instructions for their maintenance and servicing. It contains further novelties and interesting news from the production of motor-cycles and motor cars as well as reports about the successes of Czechoslovak machines in international races and competitions, all accompanied by rich illustrations.

ISSUE: 12 copies annually in English, French, German and Spanish

SUBSCRIPTION RATE: \$ 3 yearly (or in other foreign currencies).



We recommend you to send your subscription to these magazines to the CZECHOSLOVAK CHAMBER OF COMMERCE, Dept. of Technical Magazines, ULICE 28. ŘÍJNA 13, PRAHA 1 - CZECHOSLOVAKIA.

#### 06/012 Rotary Swaging Machine KRA 8

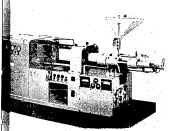
This fully automatic machine has been Inis tuly automatic matchine has been designed as an automatic production machine with a view to uninterrupted operation. It is intended for rotary swaging of various materials in forging die.

пy	uic.	
	taximum diameter of sol	id .
	naterial handled by cold	
	waging	8 mm.
Ν	taximum diameter of sol	id .
13	naterial handled by hot	
s	waging	12 mm.
	taximum diameter of	
- 11	ibular material handled	
	y cold or hot swaging	16 mm.
	jameter of bore of	10 mm.
	pindle	22 mm.
		22 mm.
	lumber of blows of die	
	er sec.	48
	utput of electric motor	2.2 kW
V	/eight	1750 kg.
		GEDO LEVEODE
		STROJEXPORT

#### 06/013 Spring Hammer AJAX 2 A

suitable for various hot forging operations, for use with standard or forming anvil blocks and dies.

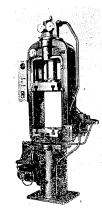
Number of blows per min.
Maximum stroke
Output of electric motor
Weight 250 220 mm. 2.7 kW 1900 kg. STROJËXPORT



#### 06/015 06/014

Fully Automatic Thermoplastic Moulding Press

intended for the injection of thermo-plastics from the melting chamber in-to the closed mould. According to the position of the injection cylinder, the injection is either square to the mould closing line (into the center-line) or



06/014

vertical into the parting line of the pressmould (joint). The function of the press is automatic, semi-sutomatic or each operation is controlled by a hand

er.	
er.	
Maximum weight of	
material for one injection	100 grammes
Maximum closing force	85 tons
Maximum withdrawing	
force	8 tons
Maximum opening force	8 tons
Maximum injection force	21 tons
Working pressure	160 atm.
Maximum distance of	
platens	810 mm.
Weight	3500 kg.
	CTROIFYPOR

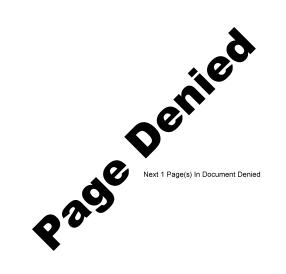
#### Hydraulic Injection Moulding Press CBA 160-1 for the treatment of

thermosets

The press has a vertical frame. The clamping platens are guided by adjustable prismatic guides. The injection cylinder piston the maximum stroke of which is in line with the plane of the table, is located in the bottom of the frame. The distribution of the closing part is controlled by three push-buttons. By depressing the push-button of the closing piston the closing piston is set in operation and the other ton is set in operation and the other

Declassified in Part - Sanitized Copy Approved for Release 2012/12/12 : CIA-RDP81-01043R001300140004-4

STAT



### 06/026 Automatic Coil Spring Machine

All House

intended for the manufacture of coil springs, right-hand and left-hand, including pressure springs, pressure springs with ends pressed into a plane, pressure tension springs, single or double bevel springs, concave and convex springs and springs of the other shanes.

Maximum output per min. Output of electric motor

STROJEXPORT

#### 06/028 Guillotine Shears NTH 200/20

for cutting sheets into small sizes for for cutting sneets into small sizes for further treatment. When cutting strips, 650 mm. wide, stops can be used. With the stands disengaged, longer sheets or strips can be cut as compared with the length of cut, but only to a width of strip of 600 mm.

TPO TO OVE THEIR.

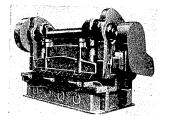
Maximum length of cut Maximum sheet thickness (50 kg./sq. mm. in tensile strength):

Cutting angle of 5° Cutting angle of 3° Cutting angle of 3° 18 mm.

Cutting angle of 3° 18 mm.

Output of electric motor 24 kW.

STROJEXPORT



06/028

#### 06/029 Press Brake OL 200

intended for simple as well as complex bending operations. The machine can also be used as a multi-operation press or shears.

Maximum working pressure Maximum working length Maximum thickness of bent sheet Throat Output of electric motor Weight 12 mm. 305 mm. 15 kW 21,000 kg. STROJEXPORT

#### 06/030 Forging Line

The forging line consits of: KU 250 roller, LKM 1600 and LKO 315 forging presses. STROJEXPORT presses.

The periodical

# CZECHOSLOVAK FOREIGN TRADE

supplies information on the export products of all the sectors of the Czechoslovak industry. Reports on fairs and exhibitions, reports on trade policy and foreign press comments, supplement the contents of the richly illustrated periodical, issued six times annually in English, German, Russian, Spanish, Portuguese and French.

#### 07 MACHINE TOOLS

#### Watchmakers' Fine Engineering Lathe "LAMA II"

designed for various fine engineering jobs in collet-chucks up to 8 mm. in dia. STROJEXPORT

#### 07/002 Universal Centre Lathe SN 40

for single part and multiple part production. The end of the spindle has a short taper with bayonet-joint. The lathe cuts all usual metric and Whitworth threads without change gears.
After changing gears, module and diametral pitch threads are also obtained.

400 mm. 750, 1000, 1500 mm. 16 4.4 kW 1650 kg. Swing over bed: Distance between centres: Number of spindle speeds: Output of electric motor: Weight:

STROJEXPORT

STROJEXPORT

#### 07/003 Universal Lathe SV 18 R

with KZ 15 hydraulic copying attachment, suitable for highly accurate finishing operations in single part and small series production.

380 mm. 60 mm. 14 to 2800 r. p. m. 1000 mm. 6 kW Swing over bed: Swing over carriage: Speed range: Spindle range 14 Distance between centres: Input:

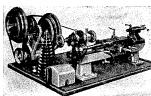
#### 07/004 Lathe SS 35

with IZS 200 thread cutting attach-ment. The gears are changed from the operator's post. The thread cutting attachment forms an independent unit.

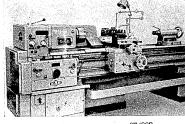
Turning length: Speed range: 1000 mm. 112 to 2240 r. p. m. Output of the motor for spindle drive: Pitch of external threads: 14 kW M6×0.75---M240×6; M30×1---M250×6.

Pitch of internal threads:

STROJEXPORT



07/001

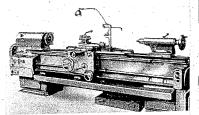


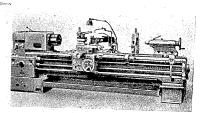
07/002

#### 07/005 Centre Lathe SS 50 K

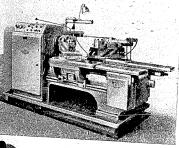
Automatic working cycle. The machine is designed for the quantity production of medium sized parts. It is provided with IKS 2 hydraulic copying attachment and hydraulic tailstock.

Swing over bed: Swing over carriage: Distance between centres: 750 to 2000 mm. 22.4 to 2240 r. p. m. 22 kW Spindle speed range: Output of electric motors: STROJEXPORT

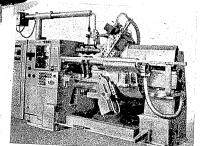




07/006







07/009 Automatic Repetition Lathe SP 31

The machine serves for machining of parts of intricate shape according to pattern by means of the hydraulic attachment and indexing card.

#### 07/006 Universal Centre Lathes SN 55 to SN 71

suitable for single part and small series production. The machine is designed for medium outputs and for cutting metric, Whitworth, module and diametral pitch threads.

	SN 55 SN 63
Swing over bed:	SN 71 550 630
Swing in bed gap:	710 mm. 800 880
Speed range:	960 mm. 10 to
	1000 r.p.m.

#### STROJEXPORT

#### 07/007 Centre Lathe SU63A

intended for single part or multiple part production up to 6000 kg. in weight. It can be provided with IKS 3 longitudinal or cross feed hydraulic copying attachment for the production of formed parts. The guide surfaces of the bed are protected by hardened gibs.

Francocca by Hall	renea gibs
Swing over bed: Distance between centres: Swing over carriage: Number of longitudinal and	630 mm. 2750 mm. 360 mm.
cross feeds: Output of electric motor:	40 17/10 kW

#### STROJEXPORT

#### 07/008 Semi-Automatic Lathe SPE 50

The machine is intended for machining medium sized parts in quantity and multiple part production. Both external and internal surfaces of the chucked workpiece can be simultaneously machined by means of the two carriages. The machine can also be adapted to hydraulic copying attachment.

rong accacinnent.	
Swing over bed: Turning length: Number of spindle speeds: Speed range:	500 mm. 300 mm. 12 54, 67, 83, 10
	133, 166, 207, 23 272 332, 408, 51

# Maximum swing over bed: Maximum turning length: Speed: Maximum input of spindle: 315 mm. 1000 mm. 71 to 1500 r. p. m. 30 kW

STROJEXPORT

STROJEXPORT

#### 07/010 Capstan Lathe R 25

The machine is intended for the production of parts from bar stock or chucked. Preselection of spindle speeds.

nucked, Freselection of	spindle spee
Swing over bed: Swing over cross slide	315 cm.
rest:	160 mm.
Spindle bore:	36 mm.
Spindle speed range:	18 to
	3150 r. p. m.
Output of electric motors	5.5 kW

#### STROJEXPORT

#### 07/011 Capstan Lathe R 5

The machine is suitable for the quantity production of parts from bar stock as well as for medium sized chucked workpieces. It has a wide range and number of speeds and feeds.

•	poods and recount	
S	wing over bed:	510 mm.
S	wing over bed slide:	450 mm.
S	wing over cross slide	
	est:	255 mm.
Į	Bar capacity:	50 mm.
S	pindle speed range:	28 to
		1400 r. p. m. 7.5/10.2 kW
(	Output of electric motor:	7.5/10.2 kW
		STROJEXPORT
		DI KOJEMI OKI

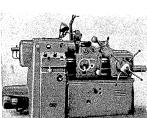
#### 07/012 Double Column Vertical Turning and Boring Mill SK 12

intended for the machining of short and heavy workpieces up to 4 tons in

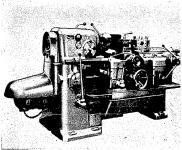
ight.				
Maximum swing over	bed	:	1350 mm.	
Maximum height of				
workpiece:			1000 mm.	
Speed ranges:				
	3.55		150 r. p. m.	
	5.3			
	7.45	to	314 r. p. m.	
Maximum output of				
electric motor:			37 kW	
		S	TROJEXPO	RT

#### 07/013 Automatic Die-Sinking Machine FkO8c with Electric Tracer Control

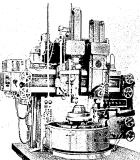
The machine produces complicated and irregular shapes of dies, moulds, metal patterns, templates and cams by three-dimensional copying from patterns.



07/01



07/011



07/012

Working surface of table: Number of spindle speeds in each range, in either direction of rotation: Input of electric motor: 2×700 mm.

8 7 kW STROJEXPORT

#### 07/014 Automatic Five-Spindle Lathe AN 35

designed for quantity production of parts from bar stock, such as pins, bushings, etc. It is also suitable for hole drilling and thread cutting if equipped

drilling and thread cutting it with respective attachments.

Maximum diameter of bar stock:
Maximum length of machining: 100 speed of electric motor: 1660 Output of electric motor: 9 35 mm. 100 mm. 1460 r. p. m. 9 kW

STROJEXPORT 07/015

#### Double Column Vertical Turning and Boring Mill SK 40

The maching intended for machining heavy workpieces up to 40 tons in weight, turning inner and outer tapers as well as for screwcutting operations. Electromagnetic copying attachment is supplied as special accessory.

Maximum diameter of turning by means of side arms.

arm: Maximum diameter of turning by means of tool 4000 mm arm: Maximum turning height: Spindle speed range: Input: STROJEXPORT

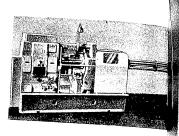
### 07/017 Single Spindle Automatic Lathe

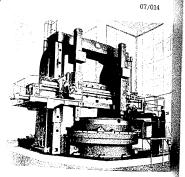
with equipment, designed for the automatic quantity and series production of simple and intricate parts from bar stock, circular, hexagonal or square in cross-section, up to a maximum size of 25 mm. and turning length of 180 mm.

Maximum/minimum spindle speed: Input: Approximate weight: 3950/568 r. p. m. 4.5 kW 1500 kg STROJEXPORT 07/018

# Camless Automatic Lathe AB 80

The machine is intended for curveless turning from bar stock, and flanging operations. The easy setting of the machine without the use of cam discs enables parts to be made even in small series. Electro-hydraulic control of the working cycle.





Diameter of bar stock: Maximum turning diameter (flanges): Spindle speed range: 80 mm. 240 mm. 45 to 2000 r. p. m. 12 kW. 4500 kg. Output of electric motor: Weight of the machine: STROJEXPORT

#### 07/019 Vertical Miller FVS 16

intended for machining small work-pieces, 75 kg. in weight. The wide range of spondle speeds and table feeds en-able carbide tipped tools to be used at high cutting speeds. Automatic cy-cle of the longitudinal table feed. Clamping surface of table: 160×630 mm.

Clamping surface of table:
Longitudinal travel of
table:
Vertical spindle feed:
Cross travel of headstock:
Spindle speed range: 160×630 mm. 340 mm. 150 mm. 200 mm. 125 to 2000 r. p. m. Output of electric motor for spindle drive: 1.5 kw.

STROJEXPORT

#### 07/020 Knee Type Milling Machine FB 50 V

This vertical milling machine which is intended for very accurate and fine machining of intricate surfaces, enables carbide tipped tools to be used to the best advantage. The control of all gears is concentrated on a suspended pushbutton panel.

500×2000 mm. 28 to 1400 r. p. m. 12 to 1200 mm./min. Working table: Speed range: Feed range: Output of motor for electric drive: Weight: 27 to 41 H. P. 9000 kg. STROJEXPORT

#### 07/021 Knee Type Milling Machine FA5u

The machine is intended for economic milling of all kinds of material by means of high speed or carbide tipped cutting tools. Equipment for uniform milling and automatic working cycle of the longitudinal table.

400×2000 mm. 18 to 1400 r. p. m. Dimensions of table: Speed range: STROJEXPORT

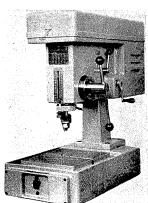
#### 07/022 Milling Machine FRE 03

This unit head milling machine is intended for the machining of plane surfaces, with a high accuracy in both single part and multiple part production. The operation of the machine is concentrated in one place. The feed of the table is infinitely variable.

800×2000 mm. 2000 mm. 28 to 900 r. p. m. 250 – 850 mm. 28 kW. Working area of table: Feed of table: Spindle speed range: Distance between spindles: Output: STROJEXPORT

### Vertical Milling Machine FV 1000

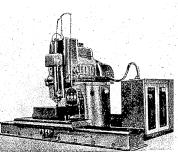
intended for the machining of heavy and complex workpieces in single part and multiple part production.

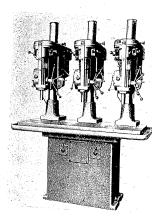


Width and length of table: Maximum height of workpiece: Longitudinal travel of table: Vertical travel of headstock: Cross feed of slide: Weight: 1000×3150 mm, 1000 mm. 2800 mm. 600 mm. 1100 mm. 22,000 kg. STROJEXPORT

#### 07/025 Bench Drill V 10 A

A medium type drill of a complete line of drilling machines. Wide speed range. Vertically adjustable headstock. Own cooling pump. Own illumination. STROJEXPORT





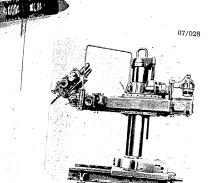
#### 07/026 Upright Drill V20/3

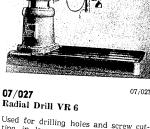
Three spindles. Drilling diameter: Working surface of base plate:

20 mm.

1400×450/3 mm.

STROJEXPORT





### 07/027

Used for drilling holes and screw cutting in large workpieces of intricate shapes. Suitable for both single and multiple part production.

Maximum diameter in dril-ling holes in steel of

60 kg/sq. mm. tensile strength 380 mm. 14 16 to 1400 Spindle stroke: Spindle speed: Number speed range:

Higher speed range: r.p.m. 20 to 1800 Floor space required: Weight: r.p.m. 5900×3750 mm. 6400 kg.

STROJEXPORT

#### 07/028 Rotary Drill VRM 50

Intended for drilling, turning and true-ing holes and cutting threads in large workpieces in all directions. Especially suitable for use in mechanical works-hops and assembling shops for the ma-nufracture of bridges, bollers as well as in shipyards.

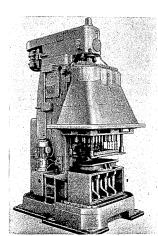
Drilling depth: Spindle speed range in either direction:

Spindle feeds: Range:

350 mm. 18 spindle speeds. 16 to 800

Weight:

0.035 to 2.2 mm/rev. 7200 kg. STROJEXPORT



07/029

#### 07/029 Multi-spindle Drilling Machine

Intended for drilling, counterboring, reaming and sutting threads in single as well as in multiple part production.

Number of spindles: Maximum diameter of drill Spindle speed range: 36 20 mm. 63 to 500 (125 to 1000) r.p.m. 1200×630 mm. STROJEXPORT Size of drilled surface:

#### 07/030 Horizontal Boring Machine H 63A

Used for precision drilling, boring, milling, thread cutting, reaming and facin of various parts.

10 of various parts.

Diameter of work spindle: 63 mm.

Maximum diameter in boring with work spindle: 355 mm.

In turning with tool slide: 560 mm.

Maximum drilling depth with one feed: 800×1000 mm.

Clamping surface of table: 8 to 1400

Spindle speed range: r.p.m.

Output of electric motor: 4 kW.

STROJEXPOI STROJEXPORT

#### 07/031 Universal Grinder BUA 31

intended for grinding external cylindrical and tapered surfaces as well as holes and planes with swivelled wheel head by 90°. Suitable for longitudinal and recess grinding with automatic wheel head travel. The machine is also suitable for use with the contact diameter mater. tact diameter meter.

Swing over table:
Distance between centres:
Longitudinal travel of
table: 315 mm. 1000 mm.

1250 mm. 170 mm. 7.5 kW. table: Cross travel of wheel head: Wheel head motor:

STROJEXPORT

#### 07/033 Horizontal Surface Grinder **BRH 25**

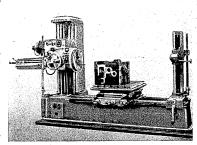
The machine is suitable for grinding of plane surfaces in both single part and multiple part production. The drive of the machine is hydraulic, and all movements of the machine are hand or automatically controlled. The grinding wheel is of rigid design.

Clamping surface of table:
Maximum grinding width:
Maximum grinding length:
Longitudinal travel of
table:
Cross travel of wheel head:
Output of wheel head
motor:

250×800 mm. 250 mm. 800 mm.

2.4 kW.

STROJEXPORT



#### 07/035 Lathe Tool Grinder BBT 350

intended for cutting the cutting surfaces of cemented carbide tipped tools. Dimensions of grinding wheels:

External diameter: Internal diameter: Width: Speed of grinding wheel: Size of tables: Hand adjustment of tables: Maximum angle of tilt of tables:	350 mm. 270 mm. 100 or 70 mm. 1560 r. p. m. 210×560 mm. 95 mm.
Electric motor:	± 15.
Speed: Output: Weight:	1420 r. p. m. 2 H.P. 820 kg.

STROJEXPORT

### 07/036 Universal Tool Grinder BN 102

The machine is intended for sharpening cutting tools, such as cylindrical and tapered reamers, end side milling cutters with straight or helical cutting edges, recessed milling cutters, taps and countersinks. It is also suitable for grinding internal and external cylindrical and horizontal surfaces.

Grinding diameter: Distance between centres of wheel head and	280 mm.
tailstock: Vertical travel of wheel	500 mm.
Longitudinal traval of	230 mm.
table by hand: Cross travel of table:	440 mm. 240 mm.

STROJEXPORT

#### 07/037 Twist Drill Grinding Machine **BNV 75**

for cutting the cutting edges of twist

Minimum diameter of twist drill: Maximum diameter: Minimum apex of drill: Maximum apex: Swing in rest: Output of electric motor:	6 mm. 75 mm. 800 1600 90 mm. 0.75 kW.
--	--

STROJEXPORT

#### 07/038 Crankshaft Grinder BKU 63

intended for grinding main and big end journals of crankshafts. Also suitable

or grinding crankshaft inds use especially in	ts. This machine repair shops.
Grinding diameter:	630 mm.
Distance between chucks:	2000 mm.
Distance between centres:	2330 mm.

Distance between centres: Maximum eccentricity of pins: Output of electric motor of grinding wheel head: 140 mm.

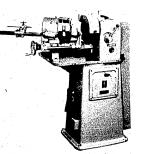
8 kW

STROJEXPORT



07/036

07/037



#### 07/039 Machine for Superfinishing Cylindrical Surfaces IDSV 3

The machine is designed for single part production or in small series. It finds use especially in the machine tool industry and is also suitable for the production of rolling mill rollers and the machining of functional surfaces of slide bearings and accurate and highly stressed shafts. The attachment can be mounted on the carriage of a lathe or on the plain grinding machine.

Working pressure: Cross feed of quill: Clamping surface: Output of electric motor:

10 to 80 kg. 20 mm. 120×360 mm. 0.3 kW

STROJEXPORT

#### 07/042 Shaping Machine HO 40

The machine is intended for shaping workpieces up to 300 kg. in weight in single part and small series production. It is also available with hydraulic copying attachment.

Maximum shaping length: Clamping surface of table: Maximum pulling power: Output of electric motor: 400 mm. 400×360 mm. 650 kg. 3 kW

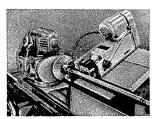
STROJEXPORT

STROJEXPORT

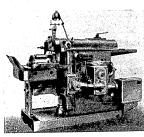
#### 07/044 Gear Shaper OH 6

The machine is suitable for the production of internal and external spur, helical and herringbone gears, gear segments, gear tooth type clutches, ratchets, cams, polygon and other shaped holes, etc. The working cycle of the machine is semi-automatic.

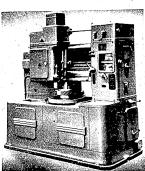
	Internal Extern Gears	
Maximum diameter of spur gears	500	500 mn
Minimum diameter of spur gears	50	50 mn
Maximum diameter of gears	90	90 mn
Maximum module Number of strokes per		mm. to 315
min. Bore of table	50	75
Output of main electric motor	3	kW



07/039



07/042



#### 07/045 Gear Hobbing Machine OF 10

The machine is intended for the production of spur, helical and worm gears. Special attachments enable the worm gears to be cut by the individual indexing method by means of a side milling cutter, or by the tangential method by means of a hobbing cutter.

		- robbing	cutter.
	Maximum module: Diameter of work table:	10 mm. 850 mm.	
	Hob spindle speed range: Number of longitudinal	20 to 125 r. p	m
Longitudinal feed table revolution	feeds of work table: Longitudinal feeds per one	36	
	table revolution: Number of vertical feeds		1.5 mm.
	of hob slide: Vertical feeds per one	36	
	table revolution: Output of main electric	0.2 to 1	5 mm.
m	iotor:	7.5 kW	
		STROJEZ	KPORT

#### 07/047 Automatic Lathe ANK 90

for squaring the ends and machining the holes of conveyor bearing tubes. The working cycle is automatic, and the operator merely inserts the tubes into the magazine. The working cycle is controlled by electric relays and electromagnetic valves. The tubes are fed and clamped pneumatically.

	Pea Pricul	~ pheumaneany.	
1	Maximum diameter of tube Minimum diameter of tube Maximum length of tube: Minimum length of tube: Speed of work spindle: Output of motor of the	90 mm. 60 mm. 850 mm. 240 mm. 315 r.p.m.	
	drilling unit: Weight:	3 kW 2100 kg.	
		STROIFYDO	

#### 07/048 Unit Head Machine 77073

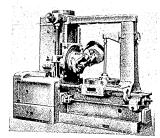
for the machining of front wheel hubs. for the machining of front wheel nubs. It drills, roughens, chamfers and cuts threads. The clamps for hand clamping are on a revolving drum. The positioning and revolving of the drum is hydraulic, the working cycle is automatic.

Output:

85 pieces per hour. STROJEXPORT

07/049 Unit Head Machine 77077

used for the machining of the rear



07/045

gearbox cover. The machine is four-sided. The vertical drilling unit carries a six-spindle drilling bar head. The clamping of workpieces is pneumatic.

40 pieces per hour.

#### STROJEXPORT

Fine Boring Machine B 2

The machine is designed for machining the engine body and exhaust cover. Hydraulic clamping.

Number of headstocks Number of clamps: Output:

07/050

STROJEXPORT

#### 07/051 Automatic Production Line LX 1

for the machining of connecting

rods

The feeds of plates with clamps, the feed of work units and the accurate adjustment and clamping of plates are hydraulic. These movements are hydraulically interconnected so that no movement can be started before the preceding one has been completed. The electric controls are concentrated on the control desk. By means of pushbuttons, located on this desk, the various functions of the machine can be switched on or off during operation. By means of a safety switch the whole line can be promptly disengaged. The motors are provided with a signalling equipment. Two operators are required for the control of this line.

STROJEXPORT

#### Ultrasonic Drilling Machine UzV 1-20

The machine is intended for the manu-The machine is interled to the maintifecture of small dies, drawing dies, irregular holes and recesses and punching holes in hard and brittle materials (metals or other materials), such as glass, germanium, ceramic materials, sapphire or diamonds.

Approximate input: Accuracy: Operating speed:

2100 W. 10-3 mm. 350 cu.mm. (glass), 20 cu.mm. (SK metal).

STROJEXPORT

#### 07/055 Electric Spark Micro-Perforator VJ 03

intended for making holes,  $0.05\,$  to  $0.8\,$  mm. in diameter, in hard and tough materials and cemented carbides.

Diameter of table: Maximum input:

100 mm. 0.4 kVA. STROJEXPORT

#### 07/057 Electric Spark Erosion Die Cutter VJK 2

used for the manufacture of medium and large size moulding tools of ce-mented carbides and tool steels.

Maximum machined surface: Automatic spindle stroke Maximum dimensions of workpiece:

10,000 sq.mm. 250 mm. 350×300×250 mm.

STROJEXPORT

### Electric Spark Thread Cutter ZJ 1

used for making threads in holes of cemented carbides and hardened steel tools.

Working range: Five machining steps with automatic process regulation.

M2 to M14. STROJEXPORT



07/053



07/055

#### 07/059 Small Ultrazonic Perforator VU 3

used for machining of hard and tough materials, such as ceramics, precious and semi-precious stones, cemented carbides and the manufacture of fine tools, various shaped tools and cavities of the hardest conductive or non-con-ductive materials. STROJEXPORT ductive materials.

STORE SCAL

#### Anode-Mechanical Electric Spark Erosion Saw for Small Sections PA 30

The machine is used for cutting of hard and tough materials, cemented carbides and special alloys, about 50 mm. in diameter.

Maximum diameter of cutting disc: Output:

300 mm. 2 kW

STROJEXPORT

# 07/061 Electric Spark Inscribing Needle

used for making inscriptions in metal objects. The needle leaves a permanent mark. Approximate output: 0.5 metre per min. STROJEXFORT

#### 07/063 Hardening Machine EKS 30

The machine is a universal semi-automatic machine for the surface hardening of small parts up to 20 kg. in weight, used both in single part and multiple part production.

Maximum diameter of hardened part: Length: Input:

300 mm. 600 mm. 0.75 kW

0.75 kW STROJEXPORT

#### 07/064

H. F. Induction Generator GV 21
The machine serves for direct heating or it finds use with other appliances,

Such as hardening machines, etc.

Maximum permanent H. F.
output;
Input at a ful load:
Frequency,
Output voltage:

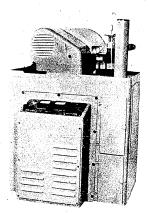
5 kVs.

5 kVs.

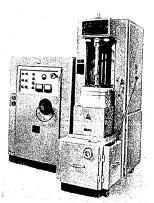
STROJEXPORT

#### 07/068 Abrasives:

Corundum, CARBORUNDUM, ELECTRITE A, ELECTRITE 99, ELCARBO grinding wheels. Porous cutting and dressed wheels. Grinding stones and files,



07/060



07/063

segments, abrasive cloths and papers.

Dental grinding wheels. Ceramic plates for machining metals. CERAMICS

### 08 FINISHING EQUIPMENT

#### 08/001 Magnetic Thickness-Gauge

Intended for measuring the thickness of surface coatings on ferromagnetic bases. Measuring ranges: MT 1: 100 to 500 microns with a mean quadratic deviation of ± 10 p. c. MT 2: to 100 microns with a mean quadratic deviation of ± 10 p. c. Novelty: Limit magnetic thickness-gauge for rapid measuring in quantity production. Measuring range: adjustable from 10 to 500 microns.

#### 08/002

#### Automatic Viscosity Regulator and Recorder for Paints and Similar Liquids

It measures, registers and maintains viscosity at the required value. Viscosity is determined by remote measuring the length of the ball in a tube. Measuring range: 10 to 2000 est or above, according to the diameter of the hall

#### 08/003

#### Pilot Plant Station for the Neutralization of Acid Waste from Pickling and Electroplating Plants

The method consists in adding continuously lime milk to the acid waste and filtering the acid waste after neuralization and coagulation of metal salts. Output: 8 cu. metres per hour.

#### 08/004

#### Automatic Dipping Plant for Electrical Resistors, Type LAO 153

used for coating resistors by dipping (values 1 W,  $^{1/}$ , W,  $^{1/}$ , W). The resistors are inserted into the mar-line in a magazine. Dimensions of the box:  $4500 \times 1100 \times 2500$  mm. Capacity: 12,500,000 resistors in 200 working shifts.

#### 08/005

#### Sherardizing Process Using Zinc Ashes

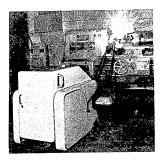
The process consists in coating steel or cast-iron parts with zinc. The ferro-



08/001

zinc alloy, produced on the surface, protects the parts against corrosion and water. It is especially suitable for screws, nuts and small parts. The service life of the coating is 10 to 15 years without maintenance being required. Output per 24 hours: 3 tons of small parts (such as M12 nuts). 1 sq. metre of coating = 20 kg of M12 nuts. Costs of 1 sq. metre of coating: 7,— Cz. Cr.

08/00



62

Electrometallizing Semi-Automatic Gun, Type EMP/2/57

with electrode arc melting, designed for spraying steel, aluminium, brass, bronze and other alloys. Diameter of metallizing wire (electrode): 2.5 to 5 mm. Output of steel: about 40 kg per hour. Weight: 150 kg.

#### 08/007 Metallizing Gun, Type AD1

intended for spraying worn parts with all metals.

#### 08/008

Airless Spraying Equipment for Electrostatic Fields

By means of this equipment, workpieces, suspended on the conveyor, are
sprayed with paints. As compared with
handspraying, an economy of about
50 p. c. is obtained. Several spraying
units can be located in the booth Minimum speed of conveyor: 1.5 metre
per min. Input 5 kW, voltage 70 to
150 kV. Quantity of sprayed paint
through one nozzle: 0.03 to 0.06 litre
per min.

#### 08/009

Chromium Diffusion Plant for the Treatment of Steel Components Designed to Substitute Brass

The chromium plated surface resists corrosion and heat up to 1000 °C. Low-carbon steels are used to replace brass. Output of the VUOM plant: 500 kg of small parts (M12 nuts) per 24 hours.

#### 08/010

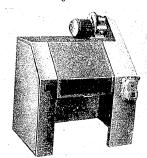
Bright Galvanizing Plant with Automatic Control of Current Density

After cathode-anode degreasing follows acid copper- and nickel-plating with bright decorative chromium plating. Novel are bright acid copper-plating and automatic control of current density by means of d. c. sets with new regulators. The output is 200 up to 400 p. c. higher as compared with that of the old baths.

#### 08/011

Cement Hand Grinder

The grinder has three planetary ceramic tools (e. g. grinding, polishing and cleaning wheels). It is easy to control, light and suitable for grinding cements, polishing paints and cleaning plane or slightly curved surfaces. Output: 5.0 cu. metres per min. Weight: 1.50 kg.

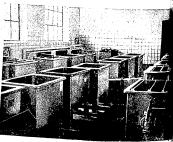


#### 08/012

08/012
Barrel Finishing Equipment
designed for polishing and finishing
large quantities of various small parts.
It consits of four barrels (barrel working space of 400×400 to 500×600 mm
in dia.), a few magazines for finishing
preparations, a separator for the separation of finished goods, and the finishing preparation.

08/010

08/012





FOREIGN TRADE CORPORATION FOR THE EXPORT OF AND IMPORT METALLURGICAL **PRODUCTS** 

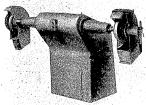
Opietalova 27, PRAHA 3 - CZECHOSLOVAKIA

Telegrams: Ferromet Praha Telephone: 22 12 00 Telex: 211 Ferromet Praha

ROLLED AND DRAWN STEEL TUBES AND TUBE PRODUCTS WIRE AND WIRE PRODUCTS STEEL FORGINGS, PRESSED WORK PIECES, STEEL CASTINGS AND FINISHED PRODUCTS POLDI HIGH - GRADE STEELS CEMENTED CARBIDES POLDI DIADUR

64





#### 08/013 Universal Belt Polishing Machine, Type ULS

suitable for grinding or polishing operations for all workshops where the speed has to be changed. The machine has two spindles. Ranges: 1580, 1780, 2000 or 2300 r. p. m.

#### Belt Polishing and Grinding Machine, Type LSP 630 D

The machine has two spindles for manual grinding and polishing or belt grinding. Each spindle is provided with its own electric motor. Ranges: 1380, 1560, 1705 or 2000 r. p. m.

# 08/014 Bell Plating Machine, Type ZAP

The machine is used for plating small metal parts. Bell plating capacity: 25 or 50 litres. By replacing the bell and immersion cathode, the ZAP 25 type can be easily converted into the ZAP 50 type and vice-versa. As compared with machines of older type, half the time is required.

#### 08/015

#### Barrel Plating Machine

The machine which is suitable for the plating of a large quantity of small metal parts, consists of two tanks. One tank contains the plating bath while the parts are rinsed with water in the other tank. The perforated plating barrel moves from one tank to the other by means of a rotary arm which derives its movement from the hydraulic cylinders between the tanks.

#### 08/016 Hot-Dip Plastic Coating

The pulverised plastic material (polyamide, polyethylene) is whirled up by compressed air in the tank into which the sprayed and preheated part is dipped. The fused powder forms a nonproson firm coating which resists corrosion, wear and breakdown voltage. The part is coated within 6 to 10 seconds; thickness of the coating: 0.4 to 1 mm.

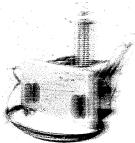
#### 08/021 Air-Cooled Polishing Wheels

used for polishing parts made of metal or plastics which must not be excessively heated. The wheels can be wound of any fabric.



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#### 08/032

#### Dynamic Corrosion Testing Device

The device enables to follow up the corrosion of materials in flowing liquids or strongly aggressive media at temperatures up to 300 °C and a maximum pressure of 4 atm. Rate of flow: 70 litres per min.

#### 08/033 Pneumatic Roughness Hammer

The hammer prepares surfaces prior to metallizing or coating, in places where they cannot be sprayed. It is also suitable for sectional surfaces, such as corners, rivet heads, etc. Output: 1 sq. metre per hour at an air consumption of 15 cu. metres per hour.

#### PRECISION TOOLS AND MEASURING 09 **INSTRUMENTS**

#### 09/001

#### Precision measuring instruments Optical dividing head

for manufacturing of gears by means of the dividing method, and, in addition, for checking the accuracy of di-



#### Slide calipers

in various lengths for measuring ranges of from 140 up to 2000 mm, with an accuracy of 1/10, 1/20 and 1/50 mm.

#### Micrometers

in many types and ranges including those for special purposes (for sheets, threads, etc.).

in three degrees of accuracy; used as basic elements for testing measure-

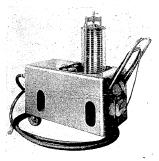




1002

#### 08/022 Liquid Abrasive Honing Plant

The part is honed and sprayed with a mixture of the abrasive, water, wetting agents and inhibitor by means of compressed air. The parts are fed mechanically under the nozzle. Output: 8 sg metres per hour. 8 sq. metres per hour.



### 08/023

Filtering Apparatus

used for filtering all galvanising baths, the chromium bath excepted. It is especially suitable for filtering bright galvanizing baths.

08/023

08/024 Anode Holders

#### 08/026 Vapour Degreasing Machine, Type 20/6

The machine degreases various parts in chlorated hydro-carbon vapours (perchlorethylene, trichlorethylene). All kinds of grease, oil, resin, pitch, tar, paraffin, sulphur, etc. are easily dissolved in the vapours.

#### 08/027 Tank Degreasing Machine, Type VOS - 0,2 - E

The machine which degreases parts of various dimensions, is especially suit-

able for repairs of machines and vehicles.

#### 08/029 Pressure Tanks

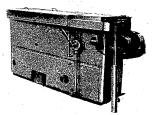
#### 08/030 Spray Guns

designed for spraying parts of all shapes with paints and cements; KF 1 litre with bottom tank. KF ½ litre with bottom tank. KN ½ litre with upper tank. KN ½ litre with upper tank. KN ½ litre with upper tank. KT, connected to a 30 or 60 litre pressure tank. LT1 in five designs with tanks of various dimensions and connections (for spraying inaccessible parts or cavities, extensions are used which enable direct or side spraying). KFO spray guns for hot spraying, with air and paint heater (the paint is supplied from the pressure tank). DS 1 for spraying smaller surfaces (decorative spraying of porcelain, glass, earthenware, for stencil work, publicity and advertising purposes). VH 1 - exhaust guns, designed to remove small particles of impurities, dust, etc.

#### 08/031 Hardness Pendulum Tester

The hardness or progress of drying of the film of paint is ascertained by means of a 500 kg pendulum of a special shape.

08/026





#### 08/032

#### Dynamic Corrosion Testing Device

The device enables to follow up the corrosion of materials in flowing liquids or strongly aggressive media at temperatures up to  $300\,^{\circ}\mathrm{C}$  and a maximum pressure of 4 atm. Rate of flow: 70 litres per min.

#### 08/033 Pneumatic Roughness Hammer

The hammer prepares surfaces prior to metallizing or coating, in places where they cannot be sprayed. It is also suitable for sectional surfaces, such as corners, rivet heads, etc. Output: 1 sq. metre per hour at an air consumption of 15 cm. metres en hour. of 15 cu. metres per hour.

#### PRECISION TOOLS AND MEASURING 09 INSTRUMENTS

#### 09/001

#### Precision measuring instruments Optical dividing head

for manufacturing of gears by means of the dividing method, and, in addition, for checking the accuracy of di-



#### Slide calipers

in various lengths for measuring ranges of from 140 up to 2000 mm, with an accuracy of 1/10, 1/20 and 1/50 mm.

#### Micrometers

in many types and ranges including those for special purposes (for sheets, threads, etc.).

#### Gauge blocks

in three degrees of accuracy; used as basic elements for testing measurements.







### "Microcator" measuring head

a high-sensitivity dial gauge for checking of extremely small differences. KOVO

#### Air gauge instrument

for checking of differences in the dimension to be measured in a considerably increased ratio; up to five secondary gauges can be connected to the principle instrument, thus enabling a number of various dimensions to be measured simultaneously.

#### "Micropassameter"

a micrometer with a built-in dial gauge; connects the advantages of a micrometer and a snap gauge with those of a dial gauge. KOVO



#### 09/051 Cutting tools

spiral drills, reamers, roughing reamers, counterbores, cutters, metal slitting saws, lathe cutting tools, thread cutting tools.

#### M 4 Scraping gear

for machining of gear teeth as a substitute for costly finishing of gears by





#### 09/071

Clamping tools

universal lathe and drill chucks, vices, etc. KOVO

#### "Perfector" electro-magnetic fixing apparatus

for drawing and checking workshop



#### 09/081

#### 09/081 Air-operated tools

09/051

metal grinding machines, metal drilling machines, drilling hammers. KOVO

#### 09/091 Industrial stones

from natural agate and synthetic sapκούο phire.

#### Hardness Testers

for rapid hardness testing of metallic materials.

#### 09/101 Tapping attachment

in five sizes according to the thread to be cut; the magnitude of the cutting resistance is controlled by depressing the springs of the ball-coupling by means of a pressure ring which is fixed in the set position by means of a screw. For the operation of these attachments respectively. no special-type taps are required.

KOVO

#### 09/111

Broaches with inserted tools

(for key-profile)

(for key-profile). The fundamental part is formed by the broach body made from case hardering steel to which the drawing, guiding and working teeth are attached; a worm-out or damaged component can be exchanged by a spare one.

#### 09/121

#### Continuous rolling of trapezoidal threads

A half of the screw is fitted with a thread by rolling between two discs which show the same profile of thread, however, with an angle of pitch different from that of the rolled thread; the discs are provided with cutting cones enabling the thread to be formed gradually.

### CZECHOSLOVAK ECONOMIC BULLETIN

informs commercial circles and persons interested in this line on the trade relations of the Czechoslovak Republic with all countries of the world and its building up. Published monthly by the Chamber of Commerce of Czechoslovakia.

10/001

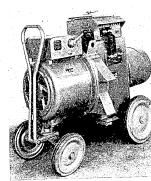
#### WELDING 10 TECHNIQUE

#### 10/001 Triodyn K 320 Mobile Arc Welder

for welding of steel, cast iron and weldable non-ferrous metals from 0.8 mm thickness up to the thickest plates. It is provided with automatic switching off and is, therefore, particularly suitable for the building trade and assembly work. Rated motor output 14 kW, connection to mains 220, 380, 440 and 500 V, welding dynamo current range 30—320 Amp. Weight 320 kg.

STROJEXPORT

STROJEXPORT



#### 10/002 K - 200 Mobile Arc Welder

for manual welding of steel, cast iron and weldable non-ferrous metals. Especially suitable for lighter duty. Mains connection 220, 380 or 500 V. Rated motor output approx. 9 kW.

STROJEXPORT

#### 10/003 TR - 150 Portable Arc Welding Transformer

single-phase, without a fan, suitable for lighter duty. Connection to mains 380 V, on request can also be supplied for 190, 220, 440 or 500 V; rated input 9.4 kW, range of welding current 15 to 155 Amp, constant output 125 Amp. Weight 96 kg. STROJEXPORT

#### 10/004 TR - 350 Mobile Arc Welding Transformer

with a fan, suitable for medium and heavy welding duty. Connection to mains 380 V; on request also for 190, 220, 440 and 500 V, rated input 29.2 kW, range of welding current 50—430 Amp., rated welding current 350 Amp. Weight 196 kg.

\*\*STROJEXPORT\*\*

## BS - 320 Petrol-Engine driven Arc

with a petrol engine, suitable for welding of steel, cast iron and weldable non-ferrous metals from 0.8 mm thicknon-ferrous metals from 0.8 mm thickness to the thickest plates. Provided with a \$koda 1201 egine, output 30 H. P., 3000 r. p. m., fuel consumption 225 g/H. P./h, water cooled, with a fan. Range of the welding current from 30-320 Amp. Weight 700 kg (compared to the existing Diesel set it weights 1000 kg. less).

\*\*STROJEXPORT\*\*

#### 10/006 T - 012 Argon - Arc Welder

portable, suitable for lighter indoor portable, suitable for lighter indoor work, for welding of aluminium, conductors of smaller diameters. Connection to mains 220 V, range of the welding current 2.4—12.5 Amp. Weight 33 kg.

STROJEXPORT

#### 10/007

#### T - O32 Argon - Arc Welder

for welding of aluminium conductors, for welding of aluminium conductors, aluminium alloys, copper, brass, stainless steel, nickeline, manganese, etc. It welds wires up to a diameter of 7 mm, conductors up to approx. 35 mm, chapts of 1 mm, thickness or this way. 7 mm, conductors up to approx. 35 mm, sheets of 1 mm thickness or thinner.
Connection to mains 220 V, input 7kW, range of the welding current 4-52 Amp.
Weight 93 kg. STROJEXPORT

#### 10/008

#### KA - 320 Triodyn Mobile Arc Welder

with auxiliary equipment for welding of aluminium and other hard weldable non-ferrous metals in a zone shielded by a covering of argon gas. Output 14 kW, range of welding current 30 to 320 Amp. STROJEXPORT

#### 10/009

#### T - 001 Portable Ionisator

for stabilization of the welding arc for welding of all kinds of material even for heavy duty. Connection to mains 220 V, max. welding current 500 Amp. Weight 20 kg. STROJEXPORT

#### 10/010 TR - 260 Mobile Welding Transformer

one phase, equipped with a fan suitable for medium heavy welding work. Connection to mains: 380 V, on request also for 190, 220, 440 and 500 V; input 167 bw rappe of welding current 31 to aiso for 190, 220, 440 and 500 V; input 16.7 kW, range of welding current 30 to 260 Amp., rated weding current 210 Amp. Weight 135 kg. STROJEXPORT

#### Electronic Regulation Control for Miniature Spot Welder

enables synchronous switching on and enables synchronous switching on and off of the welding transformer and the regulation of welding output. Weight of the equipment including thyratrons approx. 40 kg. STROJEXPORT



10/011

#### Electronic Regulation Control for Miniature Seam Welder

enables synchronous switching on and off of the welding transformer and the regulation of the welding output. Weight of the equipment including thyratrons approx. 40 kg.

STROJEXPORT

### KSI - 200 Output Stage

of high capacity, one phase a. c. electric regulator. It is necessary to connect to the KSI-200 Output Stage the controlling part which must be adjusted according to the type and characteristics of the relevant machine. Weight of the apparatus including ignitrons is approx. 50 kg.

STROJEXPORT rox. 50 kg.

#### 10/014 Electronic Regulation of EROS -S 200 Seam Welder

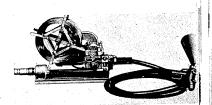
enables to control alternating current of the welding transformer by means of two electronic valve-ignitrons in cross connection.

STROJEXPORT

### Electronic Regulation of EROS -U 200 Resistance Welder

enables to control the alternating current of the welding transformer by means of two electronic valve-ignitrons in cross connection. These valves are controlled according to the method of welding or type of the welder by means of an electronic relay. The method of control can be chosen by means of a switch.

STROJEXPORT



10/016

#### 10/016 SPK - 600 Semi-automatic Welder

for submerged arc welding with automatic wire feed; the nozzle is moved in the direction of the weld manually. This welder is designed for welding of short or curved welds which could not be welded automatically. The diameter of the electrode wire is 1.6 and 2 mm, a cord of welding current up to a. c. or d. c. welding current up to 650 A, contactor box supply voltage 3×380 V + 0.50 c/s input of contactors. tor's box without welding power source 500 VA.

### VUSČA - 266 Universal Submerged Arc Welder

for welding of all types and positions of the weld. Diameter of the electrode wire 1.5, 3, 4 and 5 mm, a. c. or d. c. welding current, supply voltage 3×380 V. Weight without contactor box approx.
25 kg. STROJEXPORT

# 10/018 BP Pneumatic Automatic Spot

is supplanting several former types and is suitable for light work. Input 10 kVA, output  $2\!\times\!3.5$  mm (steel sheet).

STROJEXPORT



10/022

#### 10/019 BK 60 Motor car Body High-speed Spot Welder

Spot weller
for body construction made of sheets
of standard quality 0.8—1.2 mm. Electrode depth can be adjusted according
to the size of the welded part by moving the upper arm and the extension
of the lower arm. Throat depth 600 to
1200 mm, throat width 200—680 mm,
primary voltage 580 V. Weight 1200 kg.

STROJEXPORT

# KP - 60 Portable Gyroscopic Spot Welding

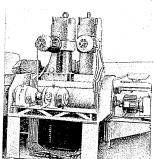
for mass production from clean sheets up to a thickness of 1.5 mm. Air pressure 5 atm., primary voltage 380 V. STROJEXPORT

#### 10/021 KP - 25 Suspended Spot Welding Gun

for welding of mass produced parts made of clean sheets up to thickness of 1.25 mm, air pressure 4 atm., primary voltage 380 V. STROJEXPORT

# TAK - 1 Thin Wire Butt Welder

for welding of steel wires of a diameter from 0.5—1.5 mm. Opening of clamping jaws 3 mm, primary voltage 220 V, four step control of welding current. Weight 15 kg. STROJEXPORT



10/023

## 10/023

TAU - 80 Automatic Butt Welder

butt welding of cross sections up to 2500 sq. mm. Primary voltage 380 V. Weight 5200 kg. STROJEXPORT

#### 10/024 KPH - 20 Suspended Spot Welding Gun

for the manufacture of motorcar bodies, railway wagons and for the buildies, railway wagons and for the building industry. It welds clean sheet of 1.25 mm single thickness, air pressure 5 atm., primary voltage 380 V.

STROJEXPORT

#### 10/025 TAK 8 P Mobile Automatic Butt Welder

for upset welding of steel, copper and aluminium wires. The welder is pneu-matically controlled, the upsetting forsteel wire 2—4 mm, primary voltage 220/380 V. Weight with the stand 96 kg.

# RSO Micron Portable Oxygen Cutting Apparatus

for manual straight, circular and variously shaped cuts in material of a thickness from 5 to 80 mm. Electro-motor 220 V, output 0.040 kW, 8000 r. p. m. Weight of the machine without accessories 6.5 kg. STROJEXPORT

# L 54 Miniature Uniform Pressure Oxy-acetylene Cylinder Welding

for jewellers, dentists and for welding of paper mill sieves or sheets up to 1 mm thickness; the set has 5 welding nozzles. Weight of the torch with handle 200 g. STROJEXPORT handle 200 g.

### T 2 Welding Torches

for preheating for heat welding, for flame straightening, local annealing, welding of steel from 30 to 100 mm thickness and for other similar shaping of metal by means of flame.

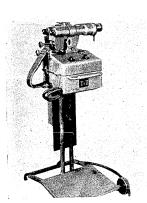
STROJEXPORT

#### PB Welding Torches

for manual welding of non-ferrous metals, brazing, annealing, etc., by means of propane-butane-oxygen burning mix-STROJEXPORT

#### 10/028 **ROV Underwater Cutting Set**

cuts by means of petrol oxygen flame steel parts and structures from 4 to 80



10/025

80 mm thickness under water up to a depth of 20 metres. STROJEXPORT depth of 20 metres.

#### 10/029 PSA Dissous Gas and PSPB Propane Soldering Set

The set is designed for soldering or brazing by means of dissous gas and air or by propane butane air mixture. All torches operate with a pressure of the burning gas of 0 2 to 1.5 atm g. STROJEXPORT

#### 10/030 Stop Valves

for opening and closing the flow of gas from steel cylinders.

#### K8 Reduction Valve

is a single stage valve for reduction of oxygen pressure from steel cylinders or from high pressure pipe line sto a working pressure of 0—8 kg/sq. cm.

STROJEXPORT

### VPK 250 Reduction Valve

for reduction of oxygen high pressure cylinder batteries to working pressure of the pipe lines of the industrial works central distribution system. STROJEXPORT

## VPK 630 Reduction Valve

for reduction of oxygen cylinder batteries or oxygen tank cars to pipe lines of the oxygen central distribution system. STROJEXPORT

#### 10/030 RN 3 Cutting Extension

for manual oxygen cutting with the use of oxy-acetylene or oxy-propane-buta-ne mixtures. STROJEXPORT ne mixtures.

#### RNK Circular Aperture Cutting Extension

for oxygen cutting of circular aper-tures of a diameter from 20 to 100 mm into steel parts. STROJEXPORT

# RNN Cutting Extension for Rivet

for manual cutting of rivet heads with a diameter of the shank from 10-30 mm. STROJEXPORT

#### 10/030 **R3** Cutting Torch

for manual oxygen cutting with oxy-acetylene or oxy-propane-butane mix-STROJEXPORT

#### RT 1 Manual Oxy-acetylene Injector Cutter

for heavy duty in foundries and for cutting scrap iron. STROJEXPORT STROJEXPORT

# KK I - II Torches for Hardening

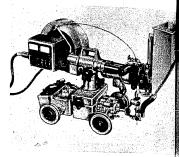
with a copper nozzle made of one piece. STROJEXPORT

# 10/030 Multishaped Cutting Nozzles

are made in one piece of pure copper by a special cold shaping process.  ${\it STROJEXPORT}$ 

# 10/031 SUM 1000 Welding Tractor

single arc welding tractor for submersingle are weating tractor for submerged are welding is of small weight with a simple control and a possibility



of continuous setting of the main welding variables. Diameter of the welding wire: 1.6, 2, 2.5, 3.15, 5 mm, a. c. of d. c. welding current up to 1000. A supply voltage 200 V, 50 c/s, input without welding power sources 0.6 kVA. Weight of the tractor 42 kg.

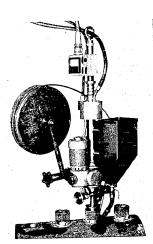
STROJEXPORT



10/032

# 10/032 RV - 01 Output Regulator

for equalizing of long term and sudden changes in the mains voltage during automatic submerged arc welding which would influence unfavorably the geometrical disconsions of the weld. geometrical dimensions of the weld, if the power source of the welding current is a single phase welding transformer. Rated voltage 220 V, 50 c/s, input of the regulator 10 VA. Weight & kg. STROJEXPORT



10/033

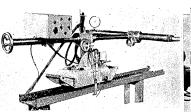
#### 10/033 SKN - 500 Automatic Welder for Welding of Boiler Chamber Sockets

Can also be used in other cases if the conditions are about the same. Range of diameters of sockets from 30—110 of diameter's of sockets from 3-120 mm, minimum diameter of the cylindrical preheating chambers 150 mm, electrode wire diameter 2 mm or 1.6 mm, d. c. or a. c. welding current up to 500 A. Weight of the welding head about 25 kg.

STROJEXPORT

## SAP 400 Semi-automatic Aluminium and Stainless Steel Welder

for welding in an argon shield. The oncumble electrode is fed automatically, the welding head is moved manually in the direction of the weld. Electrode diameter: 1, 2, 1,6 and 2,5 mm, d. c. welding current up to 400 A, the speed of feed of the electrode is from 2—12 m/min., argon consumption of 14—18 litres/min. STROJEXPORT



10/035

#### 10/035 RNS 1000 Oxygen Cutting Machine

for oxy-acetylene cutting of low carbon steels, particularly in steel mills for cutting of risers, ingot heads and for cutting of large blocks for steel furnaces. Pressure of the cutting oxy-gen from 0.5 to 5 atm. g, speed of the carriage is continuously adjustable in the range of 1 to 18 m/h. in the range of 1 to 18 m/h.

STROJEXPORT

#### 10/036 MB 2 Miniature Spot Welder

is an automatic welder of the table type for welding of thin sheets and wires. Primary voltage is 380—220 V if subjected to electronic synchronized control and 380—200—120 V when controlled by time relay. Weight 40 kg. STROJEXPORT

# Samples and Specimens of Welding Parts and Aids

(including smaller welding equipment). STROJEXPORT

#### 10/038 A Model of BK 60 High-speed Spot Welder STROJEXPORT

10/039 A Model of Pneumatic Welding Gun with a built-in KP 2 Transformer

STROJEXPORT

# T 150 Argon Arc Welding Set

for manual arc welding of aluminium, magnesium and their alloys, non-ferrous metals, stainless steel, silicon steel, etc. Output 18 kVA. Weight 600 kg. STROJEXPORT

#### 10/042 T 350 Argon Arc Welding Set

for manual arc welding of aluminium, magnesium and their alloys, non-ferrous metals, stainless steel, silicon steel, etc. Output 42 kVA. Weight approx. 800 kg. STROJEXPORT



#### 10/043 SRK 300 Automatic Summerged Arc Welder of Boiler Staybolts

Arc Welder of Boiler Staybolts
facilitates mechanical welding of boiler
staybolts in the manufacture or repairs of fireboxes (for instance of locomotives). This automatic welder can
also be used for other work if the conditions are about the same as with
staybolts. Range of staybolts diameters
from 17 to 32 mm, electrode dia. 2 mm,
d. c. welding current approx. 280 A.
Weight of the welding head 9 kg.

STROJEXPORT

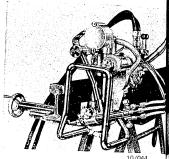
### 10/044

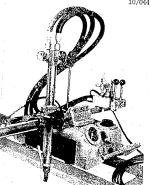
### Automatic Rail Oxygen Cutting Equipment

for rails of all known types up to the section height of 180 mm with the ex-ception of grooved of rails. Cuts are suitable for connection of rails. Total sutting time, including clamping, is 2

minutes. Weight of the cutting machine without accessories is 20 kg.

STROJEXPORT





### 10/045 RZR 300 Equipment for Oxygen Metal Powder Cutting

of steel alloys, cast iron, non-ferrous of steel alloys, cast iron, non-ferrous metals and after special adjustment, of low carbon steel sheets in bundles. It operates on the principle of oxygen cutting with the delivery of metal powders to the cutting zone by means of the oxy-acetylene flame. Maximal thickness of the material cut (stainless steel 18/8) by means of a smaller torch 300 mm, by means of a larger torch 500 mm.

STROJEXPORT

#### 10/046 VUS TS 3600 Pressure Flame Hydraulic Welding Press

welds steel pipes up to 100 mm diameter and 8 mm wall thickness or round, "Roxor" reinforcement steel up to 60×60 mm area, i. e. of 3600 sq/mm to  $60 \times 60$  mm area, 1. e. ot 5600 sq./mm total welding diameter. Maximum welding pressure 15.000 kg. Time necessary for one weld 1-2 minutes. Compared to the present methods it increases the output 5 times.

STROJEXPORT

# VUS arg R 25 Aluminium Cutting

for inert gas are cutting of aluminium. It cuts sheet aluminium of a thickness from 8 mm to 25 mm. Cutting speed from 54 to 300 metres/h.

STROJEXPORT

#### 10/048 VUS PH 30 Welding Gun for Welding of Pvc and Polyethylene

for manual welding of Pvc and Polyethylene plates of a thickness from 1 to

30 mm. Thickness of the filler material from 2-5 mm. Welding speed 7.5 m/h. Welding current 200-300 W.

STROJEXPORT

# VUS PL 10 Semi-automatic Flame Flange Welder

Welds steel of a thickness from 0.8 to 1 mm without filler metal, welding speed 16 m/h. This semi-automatic welder increases the speed in comparison. with manual welding by approx. 30% and the quality of the weld is much better. STROJEXPORT

#### 10/050 VUS arg Ms 3 Welder for Inert Gas Arc Welding of Brass Strips

Welds sheet brass of a thickness from 2—3 mm without filler metal. Welding speed 21—27 m/h. Welding current 160 to 350 A. The output as compared with manual welding increases up to 4 times and the weld is homogeneous.

STROJEXPORT

#### OIL ENGINES 11

#### 11/001 Two-Stroke Air-Cooled SLAVIA Oil Engine 1D80

stationary, vertical with crankcase scavenging of 6.5 H. P. output and 2200 r. p. m. The engine can be started by hand or by electric power. Weight: 95 kg. It serves for driving, farming or building machines, generators, compressors, pumps or cable-ways.

STROJEXPORT

### Single-Cylinder Two-Stroke Water-Cooled SLAVIA Oil Engine 1D110

stationary, vertical with crankcase scavenging, of 16 H. P. output at 1800 r. p. m. The engine can be started by hand or by electric power. Weight: 195 kg. It is used for driving farming and building machines, generators, compressors, pumps, boats, etc.

STROJEXPORT



#### 11/003 Single-Cylinder Four-Stroke Air-Cooled Oil Engine 18T120

stationary, vertical of 16 H. P. output at 1300 r. p. m. The engine can be started by hand or by electric power. Weight: 280 kg. It serves for driving farming and building machines, generators, compressors, pumps, etc.

STRŌJEXPORT

# Four-stroke water-cooled SLAVIA Oil Engine 1S100K

A stationary 9 H. P. engine at 1500 r.p.m., with belt-pulley, clutch and bonnet. The forged shaft is carried in ball bearing. The orning transfer of the state of het. The forged shall is carried in ban bearings. The engine can be started by hand or by electric power.

STROJEXPORT

#### 11/005-008 Low-Speed SLAVIA Oil Engines D5, D8, D12, D15

Stationary vertical four-stroke watercooled engines.

	D5	D8	D12	D15
Output: H. P.	5	8	12	15
Speed: r. p. m.	900	800	700	650
Weight: kg.	270	360	500	700

They are used in agriculture, building trade and industry. STROJEXPORT

#### 11/009 SLAVIA Diesel Generating Set with an Output of 7.5 kW

A stationary four-stroke water-cooled SLAVIA I S 100 A engine (mobile type) with pressure lubrication and 9 H. P. output at 1500 r. p. m.

STROJEXPORT

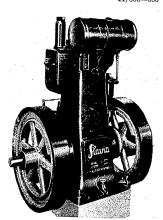
#### 11/010 13.5 kW Diesel Generating Set

A stationary four-stroke water-cooled SLAVIA 2 S 100 A oil engine with pressure lubrication and 18 H. P. output at 1500 r. p. m., transportable type. STROJEXPORT

#### 11/011 1 L 100 A SLAVIA Marine Oil Engine

A four-stroke water-cooled oil engine with pressure lubrication and 9 H. P. output at 1500 r. p. m. with adjustable propeller. It is suitable for driving small ships. STROJEXPORT STROJEXPORT

11/005-008



# 11/012 1L 110 SKODA Marine Oil Engine

A 15 H. P., 1500 r. p. m. four-stroke A 10 H. P., 1000 F. p. m. 100F-Stroke water-cooled oil engine with pressure lubrication, reversing and reduction gearbox, shaft guide and propeller, designed for driving small ships.

STROJEXPORT

#### 11/013 Mobile Diesel Generating Set with ŠKODA 2S 110 Engine

The four-stroke twin-cylinder 30 H. P., 1500 r. p. m. engine is provided with a belt-pulley, clutch, radiator on frame and bonnet.

# 50 kVA ŠKODA Mobile Diesel Generating Set

The ŠKODA 4S 110 four-stroke twincylinder engine with bonnet, has an output of 60 H. P. at 1500 r. p. m.

STROJEXPORT

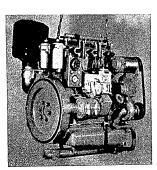
# Marine Diesel Generating Set with SKODA 4L 110 Engine

The water-cooled, four-stroke, four-cylinder engine is provided with a double-piston pump, air-starter, reduction and reversing gearbox, shaft guide and propeller. Output: 90 H. P. at 1500 r. p. m. Weight: 1540 kg.

STROJEXPORT

#### 11/016 Marine Diesel Generating Set with ŠKODA 6L 110 Engine

The water-cooled, six-stroke, six-cy linder engine is provided with a double-piston pump, air-starter, revesing and reduction gearbox, shaft guide and propeller. Output: 90 H. P. at 1500 r. p. m. STROJEXPORT



#### 11/017 Two-Stroke ŠKODA 3 D 110 Oil Engine

A water-cooled, three-cylinder, two-stroke engine with an output of 65 H. P. at 220 r. p. m. and with electric starting. Weight: 480 kg. STROJEXPORT

#### 11/018 ŠKODA 4R 140 Oil Engine

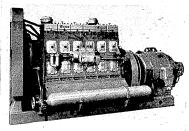
A vertical four-stroke in line oil engine A vertical four-stroke in the or engine with fuel injection into the precombustion chamber. Output: 114 H. P. at 1500 r. p. m. Electric starting. The engine finds use with power generators, compressors, pumps, etc.

STROJEXPORT

#### Automatic Emergency 150 kVA Diesel Power Station with SKODA 6 S 160 Engine

Pneumatic starter, automatic switching on or off, alarm signalling device. Speed: 1000 r. p. m. Output: 180 H. P. Water cooling. Generator output: 150 kW. The automatic emergency 150 kVA Diesel power station is used in hospitals, stores and banks where it provides an immediate supply of electric current when the power supply from the public net is interrupted. Pneumatic starter, automatic switching

STROJEXPORT





### Mobile 125 kVA Diesel Power Station with SKODA 6R 140 Engine

Engine suitable for use in open terrain, agriculture and on building sites. Maximum travelling speed (trailed): 60 km. per hour. All wheels are provided with air brakes. The special design ensures rapid transport and enables the set to be promptly set in operation in case of a break-down. Speed: 1500 r. p. m. Output: 170 H. P. STROJEXPORT

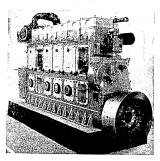
#### 11/021 ŠKODA 6L 160 Oil Engine

A water-cooled, four-stroke, six-cylinder engine. Speed: 750 r. p. m. Output: 135 H. P. STROJEXPORT

# 11/022 ŠKODA 450 kVA Diesel Generating

The set consists of a ŠKODA 65 275 stationary oil engine with suner-charging and 540 H. P., output at 500 r. p. m. The Diesel generating set

can be used for driving machines, com-pressor stations, pumping stations, as well as for lighting cities and villages, STROJEXPORT



#### 11/023 Direct Reversing ŠKODA 6L 275 PN Marine Oil Engine

with double piston pump, compressor, remote control, signalling and super-charging equipment, for use with passenger boats, tugs, etc. Output: 525 H. P. at 50 r. p. m.

STROJEXPORT

STROJEXPORT

# Rail Traction ČKD K 12 V 170 DR Oil Engine with Supercharging

A water-cooled, four-stroke, twelve-cylinder engine of a maximum output of 700 H. P. at 1400 r. p. m., with low-pressure supercharging, of 700 H. P. at 1400 r. p. m. with medium pressure supercharging, and of 800 H. P. at 1400 r. p. m. with medium pressure supercharging and intermediate radiator.

STROJEXPORT

11/025

### 11/025 DB - 1872 - A Engine

A single-cylinder two-stroke air-cool-A single-cylinder two-stroke air-coorded petrol engline of 5.5 H. P. rated output at 2300 r. p. m. It is designed for use with small agricultural and building machines, Weight: 68 kg.

STROJEXPORT

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# PragoExport

Textile of quality is guaranteed by Czechoslovak measuring instruments:

Yarn Testing Machine (Planiskop), Fabric
Strength Testing Machine, Automatic Moisture Testing
Machine, Waterproofness Testing Machine, Crease
Resistance Testing Machine, Yarn Tension Meter

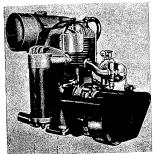
and a number of other instruments which are indispensable for up-to-date textile laboratories and testing rooms

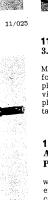
Inspect our instruments of quality

EXPORTED BY:

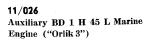
# Prago-Export

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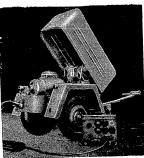




11/026



A two-stroke, water-cooled, single-cylinder engine to be attached to small boats, canoes, etc. Output: 2.5 H. P. at 4000 r. p. m. Weight: 14 kg. STROJEXPORT



11/027

#### 11/027 3.1 kVA Generating Set MV 214

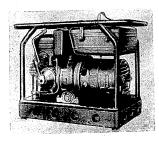
Mobile, with petrol engine, designed for use with telecommunication amplifying equipment, communication service equipment, etc. It produces three-phase alternate current of 220/580 voltage and 50 c/s. STROJEXPORT

#### 11/028 Automatic Emergency 3.1 kVA Power Station, Type MV 216

with petrol engine. The power station ensures the supply of electric power in case of break-down of the main power supply.

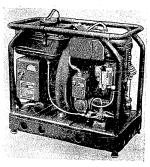
STROJEXPORT

11/029



#### 11/029 Mobile Petrol-Electric Generating Set ZB 6 ZG 53

The ZB 6 driving engine is a 1.5 H. P., 3000 r. p. m. two-stroke air-cooled engine. The ZG 53 generator is a two-pole, synchronous, single-phase type generator with own excitation, intended for continuous experies 2004 LIA 2015. for continuous operation. 220 V, 2.6 A alternate current is generated. Weight: STROJEXPORT



11/030

#### 11/030 Mobile Petrol-Electric Generating Set ZB 5 ZG 51

The set is provided with a two-stroke, air-cooled, single-cylinder ZB 5 engine of 3 H. P. output at 3000 r. p. m. The ZG 51 generator serves for charging batteries.

STROJEXPORT

#### 11/031 BD 15 50 A Engine

A water-cooled two-stroke, single-cy-linder engine of 1.6 H. P. at 3000 r. p. m., suitable for driving small agricultural and building machines.

STROJEXPORT

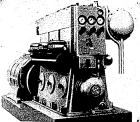
#### 11/032 ČKD Hydraulic Transmission, Туре Н 350 L

designed for locomotives which are used for shunting service in foundries, steel-works and for railway-track re-

pairs. The transmission consists of two hydraulic circuits. Speed: 1400 r. p. m. Weight: 1740 kg. STROJEXPORT

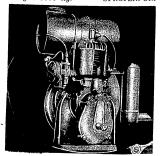
#### Vertical Single-Stage Two-Stroke Double-Cylinder Air-Compressor 2 SK 200 B

designed especially for use in the food designed especially for use in the lood and chemical industries where perfect clean air is required without the slightest trace of oil. Diameter of cylinders 200 mm. Input at 4 atm. 42 H.P. Input at 6 atm. 44 H. P. Speed Input at 6 590 r. p. m. STROJEXPORT



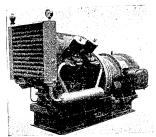
#### 11/034 CKD Vertical Two-Stage Single-Stroke Three-Cylinder Air Compressor 3 DSK 350-1

for use in mines, steel-works, found-ries, chemical works, etc. Diameter of cylinders 350/280 mm. Speed 600 r. p. m. Sucked volume 1600 cu. metres per hour. Working pressure 8 atm. Weight 3000 kg. STROJEXPORT



#### 11/037 Automatic Mobile Compressor Station ATMOS V2S-1000

for spraying with paints and varnishes and for various pneumatic appliances. Delivered volume of air 56 cu. metres per hour. Working pressure 6 atm. Weight 405 kg. STROJEXPORT Weight 405 kg.



11/038

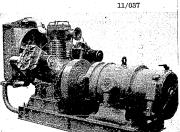
#### 11/038 High-Pressure Stationary Compressor ATMOS V4-C-1600

Forced feed circulation lubrication, efficient cooling. The automatic pressure reducing valve reduces the pressure in pipes and coolers to atmospheric pressure so that a lower starting current of the electric motor is obtained when short-circuiting. Delivered volume of air 85 cu. metres per hour. Working pressure 30 atm. Weight 720 kg.

# Air-Cooled Rotary Compressor ATMOS R 200

used as a compressor or air pump if inversely connected to the piping. Suitable for pumping air or chemically clean vapours, for use with refuse removal trucks. Delivered volume of air 220 cu. metres per hour. Working pressure 2.5 atm. Speed 1440 r. p. m. Weight 143 kg. STROJEXPORT





11/040

#### 11/040 Stationary Air-Compressor ATMOS WS 3.2 - EKO

used in plants where a large quantity of compressed air is required and with pneumatic tools - in quarries, mines, etc. Since cooling water is not required the danger of overheating or quired the danger of overneating or freezing at a normal ambient tempera-ture is eliminated. Circulation pressure lubrication. Delivered volume of air 330 cu. metres per hour. Working pressure 7 atm. Electric motor 42 kW. Weight STROJEXPORT 1400 kg.

#### 11/041 Air-Cooled Rotary Compressor ATMOS VR-200

substitutes piston compressors of the same output and pressure. Delivered volume of air 200 cu. metres per hour. Working pressure 7 atm. Electric motor 35 kW. Weight 500 kg.

STROJEXPORT

# Stationary Air-Compressor ATMOS WS 6.2 - EKO

used in industrial undertakings where a large quantity of compressed air is required as well as with pneumatic tools in quarries, mines, etc. Delivered volume of air 660 cu.metres per hour. Working pressure 7 atm. Electric motor 75 kW. Weight 1950 kg.

STROJEXPORT

#### 11/043 Mobile Compressor DK 320

A double-stage mobile compressor with a 65 H. P. air-cooled Tatra T 108 engine. End pressure: 7 atm. Output: 5.4 cu.metres per min. Weight of the set: 2400 kg. STROJEXPORT

#### 11/044 Mobile Compressor ATMOS EK 5

A double-stage compressor of 7 atm. end presure and 10.2 cu.metre output per min., with electric motor. Weight of the set: 3400 kg. STROJEXPORT

#### 11/045 Mobile Compressor ATMOS DK 4R

used for the production of compressed air for driving pneumatic riveting machines, hammers, drills and roadmaking machines on building sites, roads, railway tracks, in mines and stone pits. The compressor is arranged as a trailer, and is provided with air brakes and a hand brake. Delivered amount of air: 350 cu.metres per hour. Working pressure: 7 atm. Weight: 5600 kg. Maximum speed (trailed): 60 km. per hour. used for the production of compressed

#### 11/046 Mobile Compressor ATMOS, Type DK 600

A double-stage mobile compressor with a 90 H. P. air-cooled Tatra T 111 engine. End pressure: 7 atm. Output: 9.2 cu.metres per min. STROJEXPORT

#### 11/047 Trailer Compressor ATMOS, Type K1Z

A single-stage trailer compressor with A single-stage trailer compressor with a three-cylinder, air-cooled engine. Speed: 1200 r. p. m. End pressure: 6 atm. Output: 1.5 cu.metre per min. The compressor drive is effected from the tractor by means of a gearbox.

STROJEXPORT

#### 11/048 Cross-Section through Compressor

The compressor is an air-cooled twostage ATMOS K2 compressor. Delivered amount of air: 3.5 cu.metres per min. Working pressure: 7 atm. STROJEXPORT

#### 11/049 Automatic Mobile Compressor Station ATMOS P1 - S

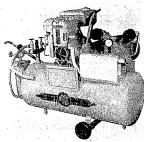
designed for spray-painting, etc. Delivered volume of air 5.5 cu.metres per hour. Working pressure 6 atm. Weight 125 kg. STROJEXPORT

#### 11/050 Stationary Air-Compressor ATMOS PV2 - EKO

for inflating tyres and various pneufor inflating tyres and various pneu-matic appliances. Easy operation. All moving parts are automatically lubri-cated. The compressor operates for eight hours without interruption. De-livered volume of air 11 cu.metres per hour. Working pressure: 6 atm. Elec-tric motor 1.1 kW. Weight 85 kg. STROJEXPORT

#### 11/051 Mobile Compressor Station ATMOS PV2-RZB 2

for inflating tyres, spraying with paints and varnish and for various pneumatic appliances. Two-stroke single-piston vertical air-cooled petrol engine with speed reduction device. The compressed air is caused. air is supplied from the air chamber or the reducing valve. Delivered volume of air 11 cu.metres per hour. Working pressure 6 atm. Output 3 H. P. Weight 205 kg. STROJEXPORT



#### 11/053 Mobile Petrol-Electric Power Plant, Type T 603 B - ZG 62, Output 15 kVA, and Type T 603 C - ZG 61, Output 30 kVA

The two power plants are driven by a Tatra 603 petrol engine. STROJEXPORT

# Supercharging Blower PDH 16 N

low-pressure, water-cooled type for supercharging oil engines, driven by an exhaust gas turbine. Suitable for 225 to 350 H. P. engines. STROJEXPORT

#### 11/055 Supercharging Blower PDH 25 S

low-pressure, water-cooled type for low-pressure, water-cooled type for supercharging oil engines, driven by an exhaust gas turbine. Suitable for 350 to 600 H.P. engines with supercharg-ing. STROJEXPORT

#### 11/056 Supercharging Blower PDH 35 N

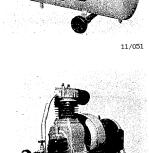
medium-pressure, water-cooled type for supercharging oil engines, driven by an exhaust gas turbine. Suitable for engines of 600 to 900 H. P. output with supercharging. STROJEXPORT

# Supercharging Blower PDH 16 S

medium-pressure, water-cooled type for supercharging oil engines, driven by an exhaust gas turbine. It is designed for use with 250 to 400 H. P. engines with supercharging.

#### 11/058 Low-Pressure Supercharging Blower RN 10

water-cooled, for supercharging oil engines, driven by an exhaust gas radial flow turbine. By means of low-pressure supercharging the continuous engine output is increased by 50 p. c. and the engine thermal efficiency is improved by 6 to 8 p. c. Designed for use with 150 to 180 H. P. engines (supercharged). STROIEXPORT



Automatic Mobile Compressor Station ATMOS K1S-1000

used for spraying paints and varnishes, inflating tyres as well as for various pneumatic appliances. Economic operation. Minimum of maintenance is required. Delivered volume of air 28 cu.metres per hour. Working pressure 6 atm. Weight 245 kg. STROJEXPORT

11/052

# 12 DEVELOPMENT EXHIBITIS OF RESEARCH INSTITUTES

#### 12/001

Ultrasonic Impulse Equipment

for ascertaining internal cracks and flaws of large forgings.

### 12/002

Gammagraphy used for the production of fittings and for checking welds

The cracks and flaws, detected by gamma-rays, are recorded on a film (gammagram).

#### 12/003

Contactless measuring of sheet thickness by means of radio active isotopes

based on the absorption of  $\beta$  rays of radio active isotopes in the measured materials. A 2 p. c. change in the sheet thickness already results in a ligible indicator deviation. A full deviation of the indicator is obtained when the sheet thickness changes by 20 p. c. from its nominal value.

#### 12/004

Recording equipment for automatic ultrasonic testing of bearing pans

Incorrect joints of the bearing pan lining are ascertained by means of the traversing method; the bearing pan is immersed in water.

#### 12/005 Case Hardening in Gas Atmospheres

The exhibit shows a model of a hardening plant where this modern and economical technological process has been adopted, as compared with an old hardening plant.

# 12/006

Nitriding Cutting and Pressing Tools

By saturating with nitrogen a thin layer of the surface of hardened tools

made of high-speed and ledeburite steels, a very hard, wear resisting layer is obtained.

#### 12/007 Surface Flame Hardening

enables large parts to be hardened which are difficult to harden otherwise.

#### 12/008 Optical and Magnetic Dilatometers

The optical dilatometer with mechanical enlargement of the measured deformation is suitable for static tensile tests of cylindrical and flat bars. Measured length: 100 mm. Measuring range (4 ranges): 0 to 250 microns.

#### Electromagnetic Recording Dilatometer

for static tensile tests. Range: 500 microns. Measured length: 100 mm.

## 12/009 Heat and Corrosion Resistant

Materials

# The new heat resisting pyroferal alloy on aluminium base (30 p. c. of Al) is suitable for casting, and frequently replaces expensive and rare heat resisting materials on Cr and Cr-Ni base.

#### 12/010 Quality and Service Life of High-Pressure Fittings

The reliability of high-pressure fittings in operation is ensured by suitable and hard surface welded seats, wedges or cones and by selenium plating. In this manner, spindles, nuts and connecting bolts are prevented from seizing.

#### 12/011 Vibratory Equipment for Fatigue Tests of Turbine Blades

Alternate stresses are produced on the blade by vibration. The blade is seismically brought into resonance (by vibrating the base in which it is clamped). Weight: 400 kg. Output of amplifier: 1 kW.

#### 12/012

Vibratory Equipment for Measuring the Resonant Frequency of Turbine Blades

The vibrations of the blade are produced by an electromagnet without premagnetizaton. Weight: 70 kg. Accuracy: 2'/00. Output: 100 kW.

#### 12/013 PEVA 4 Balancing Machine

The machine serves for electric balancing of rotors without limiting their weight. Vibration range: 1 to 500  $\mu$ . Sensitivity of recorders: 30 mVs mm. Input: 100 VA. Weight incl. cables: 25 kg

#### 12/014 Turbine Test Wheels

By means of these wheels the influence of the individual construction parameters on the efficiency of steam and gas turbine blades is systematically investigated.

#### 12/015 Axial Test Compressor, 14 to 22,000 r. p. m.

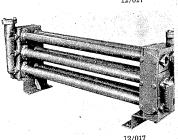
Axial, four-stage type for the research of various types of blades. It is suitable for a speed of 14,000 to 22,000 r. p. m. The runner and guide blades are provided with cylindrical pins so that their angle of adjustment can be varied. Efficiency: 88 to 90 p. c.

#### 12/016 Blade Measuring Diffusor with Semi-Automatic Counter

The apparatus is intended for investigating the aerodynamic properties of blades of steam and gas turbines and axial compressors. Maximum speed of stream of air: 60 metres per sec.



12/017



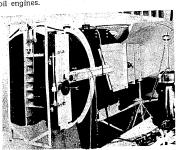
12/017

#### 12/017 Oil-Water Cooler

A cooler for oil or other viscous liquids. The thermal load of the working tube is about 2.5 up to 3-times higher than the load of the customary types of tubular coolers.

#### Three-Medium Water-Oil-Water Exchanger

suitable for cooling oil and primary water of oil engines with secondary water circulation. It replaces two independent water and oil radiators of oil engines.



### 12/018 Precision Transducers for High and Higher Temperatures

Resistor transducer for gases from 100 °C below zero to 150 °C above zero with a short time-constant. Resistor transducer for gases from 0 to 850 °C with a short time-constant. Thermocouple transducer for temperatures from 0 to 1400 °C. Thermocouple transducer with a system of steel screening shells.

# 12/019 Samples of heat changing surfaces, pictures and diagrams of new types of heat exchangers

for intermediate air coolers of piston compressors, heaters and air-water coolers, air and water coolers of viscous liquids (oils) and new asbestos-cement cooling towers.

#### 12/020

#### A model combustion chamber for the second stage of blast-furnace gas combustion

for research purposes. It stands a maximum tested load of 1800,000 kcal. per hour.

### 12/021 Ultrasonic Thickness Gauge

for measuring parts or their wall-thickness by means of ultrasonic waves. It is especially suitable for parts with one accessible wall only.

### 12/022 Micro-Polarograph M 103

used for the qualitative or quantitative analysis of materials contained in the solution of the mercury drip electrode according to the method of Profesor Heyrovsky.

# 12/023 INTERFLEX Galvanometer N4b

suitable for measuring small currents and voltages. It is provided with an inbuilt shunt for sensitivity variation when currents are measured. Sensitivity regulation range: 1/1 to 1/10, 1/100, 1/1000.

#### 12/024

# Two-Circuit Mirror Galvanometer with Suspended Coil, Type Z

for power, ballistic, compensation and other measurements.

#### 12/025 Galvanometer Zs

The galvanometer serves as a zero indicator for accurate measurement on bridges and other structures by means of direct current. It is used for making photographic records of electrochemical processes (polarography).

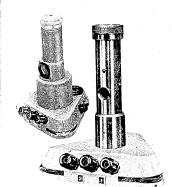
#### 12/026 Universal Shunt R 4

The shunt regulates the sensitivity of the galvanometer.



12/022 12/023







#### 12/027 Horizontal Reading Device

for objective reading of galvanometer deflections.

#### 12/028 Vertical Reading Device

for objective reading of mirror galvanometer deflections.

#### 13 MINES AND STEEL-WORKS

#### 13/001 Shortened Car Circulation

intended for unloading mine cars and returning them for further use in mines. Considerably shortened railyard length, lower gradient and faster discharging cycle. Dimensions: 9 metre width, 41 metre length. Weight including 10 mine cars: 42,000 kg. STROJEXPORT

#### 13/002 Dynamoelectric Firing Machine DEOS 25

with direct, hand-operated (rotatory) priming arrangement of electric glow (bridge) detonators for blasting operations in mines with fire hazard. Maximum number of detonators linked in tandem: 25. Resistance of priming circuit including supply cables must not exceed 110 ohms. STROJEXPORT



13/002

#### 13/003 Dynamoelectric Firing Machine DEOS 25/I

with direct, hand-operated (rotatory) priming arrangement of electric glow (bridge) detonators for blasting operations in mines; suitable for normal, dusty and humid conditions. Maximum number of detonators linked in tandem: 25. Resistance of priming circuit including supply cables must not exceed 110 ohms. Weight: 2.2 kg.

STROJEXPORT

#### 13/005 Dynamoelectric Firing Machine **DEOS 100**

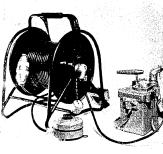
spring mounted, used for priming electric glow (bridge) detonators for blasting operations in mines with fire hazard. Maximum number of detonators linked in tandem: 100. Resistance of priming circuit including supply cables must not exceed: 500 ohms. Weight: 5.6 kg. STROJEXPORT



13/004

#### 13/004 Dynamoelectric Firing Machine DEOS 50

spring mounted, used for priming electric glow (bridge) detonators for blasting operations in mines with fire hazard. Maximum number of detonators linked in tandem: 50. Resistance of priming circuit including supply cables must not exceed 300 ohms. Weight: 5.20 kg. STROJEXPORT



13/006

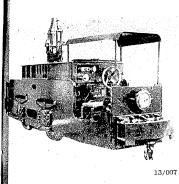
#### 13/006 Dynamoelectric Milli-Second Firing Machine DMDERS/54

spring mounted, used for electric priming of a set of glow (bridge) detonators at regular short intervals (e. g. 20 ms.) in mines with fire hazard and under normal conditions. Weight: 6.8 kg.

STROJEXPORT

#### 13/007 Overhead Wire Mine Locomotive Tld 6.5 II

used for haulage on 520 to 700 mm.
narrow gauge tracks in mines without
fire hazard. Speed up to about 20 km/hr.
Tractive force in starting: 1300 kg.
Weight: 6500 kg. STROJEXPORT



#### 13/009 Shearing Coal Cutting Machine F20 HONM

mounted on a caterpillar chassis, and used in collieries for drivages of coal seams at least 700 mm. thick and inclines up to 28°. Output of the main motor used for the air-pressure drive of the cutting chain: 18 to 20 H. P. Air-pressure: 4.5 atm. Width of furrow: 90 to 100 mm. Height: 700 mm. Width: 1200 mm. Length: 4500 mm. Weight: 2634 kg. STROJEXPORT STROJEXPORT Weight: 2634 kg.

#### 13/010 Shovel Loader NL-12-V

This shovel loader meets the requirenns shovel loader meets the require-ment of the confined space encounter-ed in mines. It is used for preparatory work in mines, tunnels, etc. up to a gra-dient of 8° and a distance of 2.2 metres from the rail head to the floor. Maxi-mum length: 1855 mm. Minimum length: 1150 mm. Minimum width without controls: 800 mm. Minimum height:

1240 mm. Maximum height: 2010 mm. Gauge: 450 mm. Shovel capacity: 0.12 cu. metre. Weight: 2200 kg. STROJEXPORT

Boring Set B 120 M-2 for boring wells in soft or medium hard rock, for building, geology and other purposes. It is equipped with tools and rock, for building, geology and other purposes. It is equipped with tools and accessories for mechanized rotary and drop drilling by free fall into a maximum depth of 120 metres (400 ft.) at a final diameter of the uncased borehole of 210 mm (81/4"). The boring set consists of a derrick with a crown, and under-carriage, derrick lifting mechanism, block, rotary table, winch, driving set, drilling tools and accessories. Maximum depth of bore: 120 metres (400 ft.). Maximum depth of uncased borehole: 100 metres (500 ft.). Rotary table - free passage: 450 mm. (171/2"). Weight of boring set: 71-10 kg. (7 tons). Weight of boring set: 71-10 kg. (7 tons).

# Rotary Drilling Bits

for use, especially, in hard and very hard rocks.

nard rocks.
a) Roller drilling bits with outer attaching thread;
b) Drille bits with inner attaching

thread; c) Four-roller drilling bits for core drilling (with inner attaching thread

only);
d) Six-roller drilling bits.
STROJEXPORT

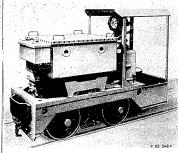
# Škoda Rolling Mill - Baby Model

for smaller plants. Suitable for rolling various sections as well as flat steel; after a change of rollers even small sections of various shapes can be handled. For use with both blanks and scrap iron (for instance, split parts of rails). Rated output of train for steel, 12" in dia.: 5.4 tons per hour. For steel, 2,5"×80" in \( \square\$\square\$\square\$\square\$\tag{TECHNOEXPORT}\)

#### 13/014 Three Product Coal Separator with Heavy Medium Closed Circuit

for the separation of black or brown coal according to its specific weight. Low electric power consumption. It

consists of the tank itself, channel, washed coal conveyor belt and waste and by-product conveyor belt. Working width of machine: 800 to 2400 mm according to the required output. Width of waste and by-product conveyor belt: 2200 mm. STROJEXPORT



#### 13/015 **Explosion-Proof Accumulator Mine** Locomotive Ald 2

Intended for haulage in mines with fire hazard. Adjustable wheel gauge: 450 to 600 mm. The two driving axles are coupled and operated by one traction motor. Output of traction motor per hour: 3 kW. Permissible tractive force: 130 kg. Starting tractive force: 300 kg. Dimensions: Width (roof of cabin excluded): 800 mm. With.roof: 1140 mm. Length: 2155 mm. Height: 1500 mm. Weight: 2200 kg. STROJEXPORT

#### 13/016 Open Cast Mine Locomotive **BND** 30

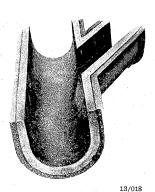
Wheel gauge: 450 to 600 mm. Output: 30 H. P. Weight: 6300 kg.

STROJEXPORT

#### 13/017 Open Cast Mine Locomotive BND 15

Wheel gauge: 450 to 600 mm. Output: 15 to 20 H. P. Weight: 3800 kg.

STROJEXPORT



# 13/018

Parts of Stowing Pipes including fittings for pneumatic or hydraulic underground conveyance

KERAMIKA - STROJEXPORT

#### 13/019 Model of Steep Angle Conveying Equipment

Discharging device of the Steep Angle Conveying Equipment, underneath the brake box Part of a system of pipes, 300 mm. in dia. of a high-speed steep angle conveying equipment, basalt, fittings, tiles

KERAMIKA - STROJEXPORT

#### 13/020 Pneumatically Controlled Plate Friction Clutch for Mine Hoists

for engaging or disengaging the loose and fixed drum of the mine hoist when passing from one horizon to another. Weight: 7000 kg. STROJEXPORT

#### 13/021 Steel Casting Ladle of 200 ton capacity

The ladle is lined with refractory bricks and the bottom is provided with a discharge hole controlled by discharge mechanism.

TECHNOEXPORT

#### 13/022 Model of a Blooming Mill Ø 1120

for rolling of blooms and slab blooms for rolling of blooms and said blooms of slightly alloyed steels, particularly of chrome-nickel steels of a tensile strength up to 80 kg/sq. mm. Output 255—470 t/h. Rolling cycle 70—115 sec.

TECHNOEXPORT

#### 13/023 Model of SM 400 t Tilting Furnace

for production of commercial quality steel; Talbot process is used. Output 29 t/h. TECHNOEXPORT 29 t/h.

# Mining Steel Equipment

Reinforcing flexible arches for prop-ping up of galleries, headings, etc. TECHNOEXPORT

#### 13/025 Drilling Pipes, Casings

pipes for pumps, oil pipelines, rib, flan-ge, smooth, precise seamless and pre-cise welded pipes; elbows, studded and shaped pipes and flanges. STROJEXPORT

#### 13/026 Transport Chutes

for handling of coal, limestone, slag, gravel, stones and other loose materials. The transport chutes can handle up to 160 tons of material per hour. STROJEXPORT

#### 13/027 Battery of thickening Cyclons

in heavy fluid washing plants for partial dilution of the washing fluid and slimes. Output of a battery of 6 cyclones approx. 400—450 cu. m/h. STROJEXPORT

#### 13/028 Washing Tank

for heavy fluid washing plant for pro-cessing of coal. Width of the tank cessing of coal. Width of the tank 1000 mm. Length of the tank 7.826. Output of the tank 80 t/h.

STROJEXPORT

#### 13/029 Draining Screen

used in heavy liquid washing plants for draining of washed products. R. p. m. 540 STROJEXPORT

#### 13/030 Tool Joint

Whole and in cross section.

FERROMET

#### 13/031 Double Slip Point type T

is used in larger railway stations for its building length which makes easy the traversing in four and crossing in two directions. Its great advantage is in delaying the contact from the point of crossing and thus achieving a smoother riding of the vehicles over the frogs. The gauge is 1435 mm and the weight 25,830 kg. STROJEXPORT

#### 13/032 Crushers and Separators

Jaw and laboratory crushers, grinders, hammer crushers, mobile crushing sets, vibrating separators, manganese winch. STROJEXPORT

### 13/033 Products of malleable castings STROJEXPORT

#### 13/034 Central Heating Boilers and Radiators

Pluto 2 boiler for burning coke of 40 × 60 grain, anthracite, coke breeze, black non bituminous coal or wood. Boiler type £1 for burning oil. Boiler EIV-7 type for burning brown coal briquettes, brown coal in pieces or black non bituminuous coal, coke, wood or peat. Ligno-II-D for burning fuel of inferior quality. Single or double column radiators of various types.

STROJEXPORT

92

# 1498 Pull

#### THERMAL MEASURING AND CONTROL 14 INSTRUMENTS

#### 14/001 Profile Type Pressure Gauge

for indicating pressures, draughts or differential pressures in technical processes. Drum-type pressure gauges for pressures up to 4000 mm. of w. col., incorporating Bourdon tube operated pressure gauges for pressures of 1 to 100 kg,/sq. cm. hydraulic pressure gauges for pressures above 100 kg,/sq. cm. and differential pressure gauges for pressures up to 4000 mm. of. w. col.

### 14/002

#### Pressure Gauges with Transmitter

(single or double) for electric remote transmission to electric indicators, line recorders or recorders with dotted record.

# 14/003

## Piston-Operated Pressure Gauge

for accurate measurement of pressures, remote transmission of the measured values as well as for signalling purposes within a range of 5 to 160 KOVO

#### 14/004

#### Low Pressure Recording Ring Balance

for pressure, vacuum  $\sigma_{\rm I}$  unit pressure measurements and recording. KOVO for pressure, vacuum or differential

### 14/005

## Draft Change-Over Switch

enables successive changing over of the draft gauge to different measuring points.

#### 14/006 Orifice Plates

intended for flow measurement of neutral liquids, gases and steam. Chamber type orifice plates with interchangeable measuring discs are used to a maximum pressure of 64 kg./sq. cm. Flat orifice plates are suitable for higher pressures or larger internal diameters of the pipe line. KOVO

# 14/007

#### Indicating Float-Type Pressure Gauge

for measuring the flow of steam, water, air or gases up to a static pressure of 100 kg./sq. cm.

### 14/008

#### Recording Float-Type Pressure Gauge

intended for the flow measurement of steam, water, air or gases up to a static pressure of 100 kg./sq. cm. KOVO

# 14/009

#### Indicating Ring Balance

intended for the flow measurement of air or gases up to a static pressure of 1 kg./sq. cm.

#### Low Pressure Recording Ring Balance

intended for the flow measurement and recording of air or gas up to a static pressure of 1 kg./sq. cm.

#### High Pressure Recording Ring Balance

intended for the flow measurement and recording of steam, water, air or gases up to a static pressure of 40 kg./sq. cm.

#### 14/010 Float Liquid Level Gauge

for liquid level measurement in closed tanks under pressure. Suitable for working pressures up to 100 kg./sq. cm. KOVO

#### 14/011-013

#### Resistance Thermometers and Pyrometers

for remote electric telemetering of temperatures of steam, gases and liquid in pipe lines, boilers, combustion chambers, flue gas ducts, kilns, etc. Resistance thermometers are designed for temperatures up to 550 °C. Pyrometers are suitable for temperatures up to 1600 °C. KOVO

# Electric Flue Gas Analyser

for measurement of  $CO_2$  and  $CO\ +\ H_2$ content in combustion products. KOVO

#### Salinometer

for conductivity measurement of steam condensate. Measuring range: 0 to 25  $\mu$ S.

#### 14/016

### Salinometer

for conductivity measurement of steam condensate.

Measuring ranges: 0- 15 
$$\mu$$
S, 0- 10  $\mu$ S, 0- 250  $\mu$ S, 0-100  $\mu$ S, 0-1000  $\mu$ S, 0-500  $\mu$ S.

#### 14/018 Oxygen Meter

intended for measuring the volume of oxygen in gases.

#### 14/019 Electric Temperature Indicators

designed to indicate the temperatures designed to indicate the temperatures measured by pyrometers. They are also used in conjunction with d. c. outlet transmitters for indicating other values of electrically measured variables.

#### Electric Indicators

with bridge cross-coil measuring system. They are designed to indicate the temperature measured by electric resistance thermometers.

# 14/020

#### Numo Indicators

with null motor measuring system, designed for remote recording of measured values.

# Point Recorders

Single-, two-, three- and six-point re-corders with dotted record of 1 to 6 KOVO

# 14/022

# Line Recorders

with null motor measuring system, designed for remote transmission of values measured by pressure gauges, flow meters, etc.

#### 14/023

#### Potentiometer Recorders

with compensating measuring system for temperature and other measurements.

#### 14/024 Capillary Tube Thermostat

intended for two-position temperature control or signalling in pipe lines, ducts only the control of signalling in pipe lines, ducts only the control of signal to the control of two-position temperature control or signalling in pipe lines, ducts control or signalling and tanks.

#### 14/025

#### Room Thermostat

intended for two-position temperature control or signalling in regrigerating plants.

# Chopper-Bar Controller

for two-step control (on - off) or for temperature signalling. KOVO

#### 14/027

## Magnetic Controller

for two-position temperature control, for use with resistance thermometers.

# Self-Operated Temperature

# Controller

for the control of the heating liquid
KOVO

#### 14/029 Manostat

# for pressure control or signalling the pressure of air, gases, steam or liquids.

#### 14/030 Float-Type Controller

# for the control and signalling of the

liquid level in closed tanks.

Declassified in Part - Sanitized Copy Approved for Release 2012/12/12 : CIA-RDP81-01043R001300140004-4

STAT





#### **ABRASIVES**

Grinding wheels Emery paper and cloth

# REFRACTORY PRODUCTS

Fireclay Silica Magnesite bricks

## CAST BASALT



Foreign Trade Corporation PRAHA II, V JÁMĚ I — CZECHOSLOVAKIA

## Air-Operated Pressure Transmitter

- a) Diaphragm-operated for pressure control and measurement up to 250 mm. of w. col. b) Bellows-operated for pressure con-trol and measurement up to
- c) Bourdon tube-operated for pressure control and measurement up to 100 kg./sq. cm. KOVO

## 14/045

# Air-Operated Temperature

#### Transmitter

- a) in conjunction with a potentiometer recorder, air-operated controller and remote control panel, with various ranges from -100 to +200 C. Minimum range: 50 °C.
- nimum range: 30 °C.
  b) Quick-acting temperature transmit-ter for temperature measuring and control, of various ranges from —100 to —200 °C. Minimum range: 50 °C. KOVO

# Air-Operated Level Transmitter

for level measuring and control up to 200 mm. of w. col. KOVO 200 mm. of w. col.

#### 14/047

### Air-Operated Flow Transmitter

for flow measurement and control, nominal pressure: 160 kg, sq. cm. Differential pressure: 8 to 50 kg, sq. cm.

#### 14 048

#### Air-Operated pH Value Transmisser

for the premnant remote transmission of measured values. 2000

#### 14 049

#### Central Paenauctic Relay

Pressure sampe of the presonable con-

#### 14 05@

# Hand Reday No. 979001

for preumatic manual source seeling of the control and problem. 2006

# 14 351

#### Course Canel Dr. Willel

the spacegring in an art of the grown made control.

# 14/052

#### Booster Relay No. 07021

for amplifying the control impulses of the central pneumatic relay or piltransmitter,  $\frac{\partial}{\partial t} V(t)$ 

#### 14/053

#### Diaphragm-Operated Control Valves

for remote manual control or, to con-junction with low pressure alr-opera-ted controllers, for the automatic flow controller, for the agnorance from
be used with advantage especially in
processes with a dangerous amblent.
Rated pressure 40, dia. 25
do. 49, do. 40
do, 49, do. 56

do. 16, 40, 6

#### 818/11

#### 14/054

#### Potentiometer Controller

for continuous control of temperature or other values, or successive transfera-ture control by changing over WIII's

#### 14/055

### Bridge Controller

for three impose feeding condeth. KITT's

#### 14/056

#### Electric Primer Unit P WW XX

with cocard value for the retental sec-ercy and automatic control of enter for slogs, broke of special 30 mm. Tenso phase secretic monor, 36 m. 30 (26.3)

#### 14/357

# Rapassia province Laid & SW XX

with street yet rather than streetally streetast AND ANDROMENTAL ASSESSED AS SHOULD BEEN STATE

#### 14/953 MARKETE PRINTY CHANGEY & WANTY

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#### 14/059-062 Electric Power Units with Rotating Output Shaft

for the control of shut-off or control fittings.

tings.

Type Mo 9 kgm. —
base or flange type for smaller
gate valves or for the operation of by-pass valves.

Type Mo 20 kgm. —
for medium gate valves and for
high-pressure valves with relieved packing, where rapid and
light closing is required.

Type Mo 80 kgm. —
for remote operation of large
fittings, especially gate valves.

KOVO

#### 14/063-066 Lever-Type Electric Power Units

for remote control and automatic confor remote control and automatic control of throttling valves, dampers, slides, fan vanes, for the drive of motor brushes, transformers, etc.

Type Mp 2 kgm. Mp 25 kgm.

Mp 100 kgm. Mp 100 kgm.

Mp 100 kgm. KOVO

# 14/067

Boiler Panel

for grate boilers with a capacity of 40 tons per hour, steam pressure of atm., steam superheating of 425 °C of 40

# 14/068

Lever-Type Electric Power Unit, 25 kgm. KOVO



14/073



14/074





14/075

# 14/077

#### 14/069 Electric Power Unit A 500

with feed valve.

KOVO

#### 14/070 Pneumatic Lever Power Cylinder

for the control of the speed of grate.

# Pneumatic Lever Power Cylinder

for the control of the fan control valve.

# Maxigraph Křižík M6S

for marking on a paper chart the mean value of the measured load, such as electric power, within certain time periods, the so called integration periods. Voltage: 110 or 220 V. Input: 20 W. Weight incl. box: 28 kg. KOVO

# Despatching Cabinet Křižík DS6

designed for automatic checking of the consumed energy according to the determined chart. If the signalling device is set in operation and the consumer sections can also be cut off. Voltage: 110 or 220 V. Input: 35 W. Weight: 12 km.

# Accurate Three-Phase Three-Wire System Watt-Hour Meter P3

designed for measuring energy in three-phase three-wire systems. Avai-lable for rated voltages of 100, 110, 220, 580 or 500 V. Rated current: 1 and 5 A. Frequency range: 50 to 60 c/s. KOVO

### 14/075 Single-Phase Watt-Hour Meter

for measuring energy in single-phase a. c. systems. Available for rated currents up to 40 A with 100 to 200 p. c. rents up to 40 A with 100 to 200 F. of overload. Rated frequency range: 40 KOVO

#### 14/076 Single-Phase Double Tariff Watt-Hour Meter EJ 8D

for measuring energy in single-phase a. c. systems by using two different tariffs. Available for rated currents of 5,10,20 and 50 A with 200 p. c. of overload, or for 5, 10,20,30 and 40 A with 100 p. c. overload. For rated voltages up to 400 volts. Rated frequency range: 40 to 60 c/s.

#### 14/077 Three-Phase Three-Wire System Watt-Hour Meter ET3

for measuring energy in three-phase three-wire systems at any required overload and phase shifting. Suitable for voltages up to 3×500 V. Currents: 5, 10, 20, 30, 50, 75 and 100 A. Frequency range: 50 to 60 c/s (for one quency only).

#### 14/078 Three-Phase Four-Wire System Watt-Hour Meter ET4

for measuring energy in three-phase systems with neutral conductor at the required overload and phase shifting. KOVO

#### 14/079-080 Three-Phase Double-Tariff Watt-Hour Meters ET3-4D

for measuring energy in periods to which two different tariffs apply. Their design does not differ from that of ET3 or ET4 watt-hour meters. They are, however, provided with a double counter.

#### 14/081-082 Three-Phase Double-Tariff Watt-Hour Meters with Maximum Indicator ET3-4DM

In addition to the whole energy supplied, these watt-hour meters indicate the maximum average value of the load within a certain time period, the so-called intergration period. This period can be selected within a wide range.

#### 14/083 Signalling Wattmeter WSM

ensures the supply of energy up to a certain figure only. As soon as this supply is exceeded, it signals by means of the time lag relay.

KOVO

#### 14/084 Time Lag Relay ZRWS

serves for direct switching on the signalling devices and automatic switching off the contactor. KOVO

#### 14/085-086 Switch-Over Clock H2-D-M

serves for changing over the tariffs and switching on the maximum indicator of the watt-hour meter. KOVC KOVO

#### 14/087 Time Switch H2VS

designed for automatic switching on or off public illumination, shop window illumination, neon advertisements, accumulating stoves, steamers, etc.

. KOVO

#### 14/088 Summation Clock SHS

The clock measures the number of hours during which an electrical appliance has been in operation, it indicates the extent to which it has been utilized, and ascertains the period of its operation when its service life has been guaranteed. KOVO

#### 14/089 Automatic Parallelling Instrument RFS

The instrument immediately connects

a) excited synchronous generators with one another and the consumer net, b) long sections of the net even under unfavourable operating conditions

#### 14/090 Comparative Voltage Equipment SE2

The comparative voltage equipment serves for automatic adjustment of the phased generator voltage to that of the net. It is available in a bakelite case, to be mounted on the panel. KOVO

#### 14/091 Automatic Synchronizing Equipment STU

intended for automatic synchronizing the alternator speed with the frequency of the net before the alternator is con-nected. The instrument enables to set

the impulse period within a wide range and limits the impulse density.

Reactive Power Regulator WOR-8 for automatic regulation of reactive power by switching on or off the regulating stages of a condensor battery. KOVO

#### 14/094 Auxiliary Case WOR-p

An auxiliary equipment designed to increase the number of regulating stages of the WOR-4 or WOR-8 regulators by further 4 stages. The case contains four auxiliary relays of RP 90 type with resistors.

#### 14/095 Oscilloscope T 531

designed for the observation of voltage wave-forms of the lowest frequency (of d. c. voltages) up to 2 Mc/s. A vide frequency range of the amplifiers and time base make the oscilloscope suitable for various engineering, physical, chemical or biological research.

#### 14/096 Measuring Oscilloscope T 565

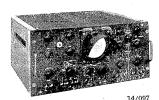
suitable for impulse measuring. This oscilloscope enables the observation of wave-forms and measurement of d. c. voltages of a frequency of 0 to 1 Mc/s.



. 14/099



14/098



#### 14/097 Double-Beam Oscilloscope D 536

A universal oscilloscope which serves for the observation of voltage walve-forms and phase of the lowest frequency up to 1 Mc/s. It is suitable for the observation of periodic and aperiodic currents of 10 mV to 500 V. KOVO

#### 14/098 Five-Beam Oscilloscope K 552

This universal oscilloscope serves for the simultaneous observation of voltage wave-forms and phase of up to five voltages of the lowest frequency up to 1 Mc/s (of d. c. voltages). KOVO

#### 14/099 Double-Beam Oscilloscope D 564

This universal oscilloscope is designed for independent double observation. It is suitable for the observation of periodic and aperiodic voltages of 10 mV to 500 V of the lowest frequency up to 1 Mc/s (even of a. c. voltages). KOVO

#### 14/100 Ten-Beam Oscilloscope K 572

This oscilloscope serves for simultaneous ten-beam observation on one screen. It is used for measuring com-plex regulation systems of mechanical structures (by means of a tensometer). KOVO

#### 14/101-104

Polaroscope P 576

The polaroscope finds use in qualitative or quantitative oscillographic polarography. The curves which are shown on the screen, correspond to the composition of the tested solution. By means of in-built calibrating instruments, both qualitative and quantita-tive analysis can be made. KOVO

# 14/102

Ferroscope F 563

serves for checking magnetic materials, especially iron by means of the comparative method.

# 14/103

Preamplifier Z 562

This instrument is designed to increase the sensitiveness of standard type oscilloscopes with d. c. amplifiers. It amplifies voltages of 0 to 50 kc/s, and finds use in industries where oscilloscopes are used.

#### 14/105 Regulating Auto-Transformer RT 2.5 (RT/A 2.5)

for continuous manual regulation of a. c. voltages within a wide range.







14/105

#### Regulating Auto-Transformer RATIO, RAT3×10

with an adjustable a. c. voltage source from 0 to 250 V at 10 A maximum demand. It is fed from 220 or 120 V single-phase mains. KOVO

#### 14/106-109 Alternate Voltage Electronic Stabilizers ST250, ST500, ST1000, ST2000, ST5000

serve for stabilizing the net voltage fluctuation of  $-15\,\mathrm{p.c.to}+10\,\mathrm{p.c.of}$ , the 220 V rated voltage, i. e. from 190 to 240 V. They compensate simultaneously for the losses arising at overloads so that the input voltages of appliances can be stabilized despite a highly fluctuating load and frequency of 45 to 65 c/s.

#### 14/110 Current Transformer IVN

intended for measuring alternate currents from 5 to 30 A at a rated secondary current of 5 A (1 A exceptionally).

#### Current Transformer IVT

intended for measuring higher alternate currents from 100 to 600 A.

#### Current Transformer IVm

intended for measuring higher alternate currents from 50 to 300 A.

### Current Transformer IVD

serves for measuring higher alternate currents of maximum rated values within a range of 50 to 800 A.

### Current Transformer IVP

serves for measuring alternate currents of maximum rated values within a range of 1000 to 10,000 A. KOVO

#### 14/111 Quick-Acting Distance Protective Relay for earthed nets of very

high voltages D 110

Rated values 1 or 5 A, 100 V, 50 c/s. Auxiliary voltage 110 or 220 d. c. voltage. Weight 65 kg.

STROJEXPORT

#### 14/112 Universal Moving Coil System Relay UCR

The moving coil is in the field of a permanent magnet (Depréz d'Arsonval System). It serves as an indication relay for bridge connections (type 1) or a measuring relay of d. c. values or with a. c. rectifiers (type 2). KOVO KOVO STROJEXPORT

#### 14/113 Relay Automatic for Three-pole Repeat Switching OZ31

The OZ31 automatic controls three-pole reswitching in the case of a breakdown in the net. It provides for definite switching off in case of a permanent breakdown or short-circuit. STROJEXPORT

#### 14/114 Relay Automatic for Repeat Switching for very high voltages OZ101a

The OZ101a automatic controls a single or three-pole reswitching cycle with an adjustable currentless interval. Should a further breakdown occur during the reswitching cycle, the net is cut off definitely. STROJEXPORT

#### 14/115 Longitudinal Comparative Protection Relay S30A

The relay is designed to protect short sections of the supply line where a mi-nimum cut out period is required du-ring a breakdown. Voltage transformers or d.c. auxiliary sources are not required

STROJEXPORT





14/115

14/116

#### 14/116 Comparative Phase Protection Relay S102

for outdoor lines or cables- in systems with insulated or earthed neutral. The relay operated in single-relay connection with transformer. STROJEXPORT

# Time Relay TD1

High service-life. Designed for de-laying the control impulses in installa-tions where a high service-life and frequent switching is required (for instance in automatic machine tools). STROJEXPORT

#### 14/118 Overcurrent Time Relay A3T

The relay delays the action of switches during short-circuits or over-

loads. It serves for the protection of earthed three-phase mains and in-stallations.

#### 14/119 Two-Phase Overcurrent Protection Relay A2M1

for switching off with measuring transformer current. The relay delays the action of switches during short-circuits or overloads. It serves for the protection of three-phase non-earthed mains and installations. STROJEXPORT

#### 14/120 Protection Relay for Asymmetrical Overloads N10

A double-stage protection for installations in three-phase systems, subjected to non-asymmetrical overloads. STROJEXPORT

# Earth Fault Generator Rotor Protection Relay GR 20

used for the protection of generators. STROJEXPORT

#### 14/122 Voltage Relay F 1

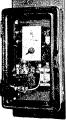
for winding protection or earth stator protection of generators operating in block with a transformer. The relay is provided with a time member and indicator and output relay with drop flag.

STROJEXPORT











14/121

14/123

14/125

#### Frequency Protection Relay F 3

for switching off less important sections of the net at overloads resulting in the frequency drop. STROJEXPORT

# 14/124 Fault Phase Sequence Protection Relay VN1

for the protection of installations with three-phase drive at fault phase sequence (for instance, suitable for elevator motors).

STROJEXPORT

### 14/125

#### Fine Time Relay T

for delayed impulse switching at given periods with a high accuracy.

### Long Term Time Relay TM

for a delayed action of control impulses in automatic installations. The synchronous motor with transmission and electromagnetic clutch and the auxiliary relay are in-built to a common case.

STROIEXPORT

#### 14/126 Auxiliari

### Auxiliary Relay RP 40

for smaller outputs, suitable for d. c. installations.

### Auxiliary Relay RP 90

A small auxiliary relay with a high switching frequency. The relay should be in-built to the control equipment or apparatus.

### Auxiliary Relay RP 100

A small auxiliary relay with a high switching frequency. The relay should be in-built to the control equipment or apparatus.

#### Excitation Relay RPK

for remote control by current impulses or current interruption.  ${\it STROJEXPORT}$ 

# 14/127

#### Remote Measurements

of electrical and non-electrical quantities in power installations, iron works and mines. Measurement of power supply and consumption. KOVO

#### 14/128

#### Magnetic Amplifier

comprises no rotating components nor contacts, has a practically unlimited life, requires no maintenance, is shockproof, instantaneously ready for service and can easily be tested. KOVO

## 14/129

# ROME Magnetic Speed Regulator of D. C. Machines

for economically varying, at will, the speed of a D. C. motor from zero to the maximum speed, and for maintaining it at a constant value. Accuracy of maintained speed  $\pm 1~\%.$  Supply voltage  $5{\times}580~V.$ 

Type ROME 0.3 Type ROME 0.7

motor output 0.3 kW motor output 0.7 kK KOVO

#### Type Rosse U.

# Pilot-less Remote Control (of cranes)

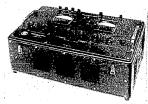
suitable for use in industrial installations under heavy service conditions. Frequency 27,120 mc, 8 independent control channels. KOVO

#### 14/132

14/131

#### Non-contacting Thickness Meter

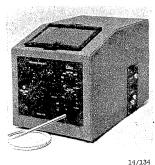
for measuring the areal weight of various materials by means of the beta radiation of various radio isotopes. KOVO



#### 14/133

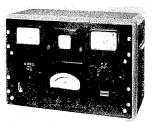
#### 14/133 Loss-angle Meter

for measuring the loss angle of electrical motors and generators at the respective working voltage; it is very useful in the production of electrical machines.



#### 14/134 Ferrograph

for measuring special magnetic materials with a high initial permeability. KOVO



#### 14/135

#### 14/135 Ferrometer FM 02

is an electronic measuring instrument for measuring the magnetic properties of transformer and dynamo sheets for ascertaining quickly and accurately all values necessary for the qualification of ferro-magnetic materials. Supply voltage 220 V.

### 14/136

#### Quality and Quantity Analyzer

for qualifying the realization of the production schedule in the course of the work-shift.

# 14/137

#### Transient Phenomena Recorder

produces simultaneously graphic records of six phenomena on the tape of a magnetic recorder. Frequency band  $0-1~\mathrm{kc}$ .

#### 14/138 D. C. Tachodynamos T1 and T2

serve as control elements of servome-chanisms and for indicating the number of revolutions. Excitation by means of permanent magnets, linearity  $\pm 1\%$ , the maximum A. C. component of the D. C. voltage is 0.5%. KOVO

#### 14/139 Two-phase Induction Servomotors SMA 1, SMA 2.5, SMA 5

serve as control elements in servome-chanisms with the motor acting as the source of mechanical energy. Voltage 115 V, 500 c/s, outputs 1-2.5-5 W.

#### 14/140 Metal Thyratrons TK

for use as controlled electronic valves. Available types TK 001, TK 002, TK 003 (directly heated), and TK 004 (indirectly heated). STROJEXPORT

#### 14/141 Mercury Switches up to 30 A, 250 V A. C.

for small controlling forces and for making and breaking relatively large making and breaking capacities. Made of soft glass for small capacities and current ratings up to 10 A at 250 V A. C., or with a ceramic insert up to 15 A at 250 V A. C., or of hard glass for current ratings up to 15 A at 250 V A. C., or with a ceramic insert for current ratings up to 30 A at 250 V A. C. STROJEXPORT

#### 14/142 Types ERO 3100 R and ERO 375 R Speed Regulators of D. C. Motors

for gradually varying, at will, the speed of motor drives. Large range of speed variation independent from the load. Speed selection by means of a small potentiometer which makes it also suitable for remote control.

STROJEXPORT

# 14/143 Electronically Controlled Rectifier U 300/25-R-30

STROJEXPORT

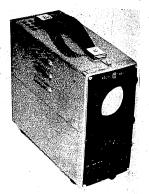
#### 14/144 Electronic Lighting Regulator ERSt 120

for gradually varying, at will, the brightness of filament and other lamps. No loss of power during the process of regulation. The regulation is based on the application of two thyratrons TK 001. STROJEXPORT

# 14/145 Testing Device VELTECHNA CS III

used for calibrating single-phase and three-phase elctricity meters, and for

laboratory measurements (testing of electricity meters, measuring instruments, relays, etc.).



14/146

#### 14/146 Control Oscillograph

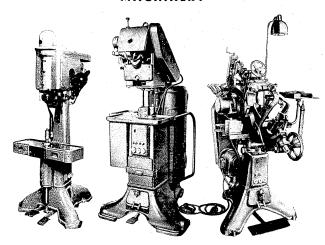
used for control and maintenance of instruments for remote measurements of the range of acoustic frequencies and D. C. voltages. Rated supply voltage 220 V.

From the periodical

# CZECHOSLOVAK FOREIGN TRADE

you can learn about the products you have not seen at the exhibitions. The periodical appears three-times a year in six languages and contains information on the export products of all branches of the Czechoslovak industry.

# 5 TEXTILE, FOOTWEAR AND GRAPHIC MACHINERY



15/011

15/009

15/008

#### 15/001 Folding Up Machine, Serial No. 01221

The machine is used for flanging and folding up skived parts of upper leather or canvas in the manufacture of upper parts. The machine replaces, to a great extent, folding up by hand. Approximate weight: 107 kg. . . . KOVO

#### 15/002 Chainstitch Arm Sewing Machine, Serial No. 01086

The machine finds use in the footwear industry. Two needle reinforcing binding sewing machine; needle pitch: 3.2 mm. Two needle faulse instep sewing machine; needle pitch: 8 mm./ 1.2 mm. Maximum number of stitches: 3000 per min. Maximum thickness of sewn material: 4 mm. Weight: 99 kg. KOVO

#### 15/003 One Needle Post Bed Sewing Machine with Trimmer, Serial No. 01090

No. 01090

The machine is used for bordering fold-sed uppers while simultaneously trimming the lining, or for bordering unfolded uppers with simultaneous trimming of the upper leather together with the lining. The design of the post bed machine enables easy guiding and turning of the upper in all directions. Maximum number of stitches per min.: 2700. Stitch length adjustable from 3 to 8 stitches per 1 cm. Weight: 108 kg. KOVO

#### 15/004 Heavy Duty Single Needle Post Bed Sewing Machine, Serial No. 01192

The machine serves for sewing on vamps of working boot uppers. Appro-

ximate output: 400 pairs. Stitch number per minute: 1400. Stitch length adjustable from 2 to 4 stitches per 1 cm. Weight: 180 kg. KOVO

# Heavy Duty Binding Sewing Machine, Serial No. 01119

The machine is used in the footwear industry for binding working boot up-pers as well as for binding other pro-ducts of medium tough materials. Maximum number of stitches per min.: 1400. Maximum thickness of handled materials: 12 mm. Approximate weight: 160 kg. KOVO

#### 15/006 Automatic Bobbin Winder, Serial No. 01218

The machine is used for automatic winding of bobbins for the shuttles of sewing machines. The bobbins must have even sides, their dimensions being 20 to 25 mm. in diameter and 7 to 15 mm. in width. The machine works reliably with varn up to No 4 thickness. Output with yarn up to No. 4 thickness. Output per 8 hours: 1200 bobbins. If small bobper 6 hours: 1200 boddins. It small bod-bins are wound, the output is still high-er. Approximate weight: 65 kg. KOVO

#### 15/007 Cement Applying Machine, Serial No. 02113

The machine is used for simultaneous applying of one, two or three layers of non-corrosive cement. Permissible thickness of materials: 0.4 to 6 mm. The applied cement layer is adjustable from 0.2 to 1 mm Approximate weight: from 0.2 to 1 mm Approximate weight:

### 15/008

#### One Action Pulling Over Machine by Cementing,

Serial No. 02002/P 2

The machine supersedes toe flanging, lasting the forepart and roughing-up. It eliminates or combines several operations. Output of the machine in 8 working hours: 1200 shoes. Approximate weight: 790 kg.

# 15/009

### Rough Rounding and Chanelling Machine, Serial No. 04033

This machine serves to round and channel leather soles on lasted welt

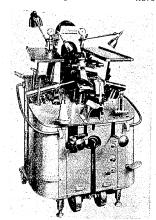
and flexible footwear. Output of the and flexible footwear. Output of the machine per 8 working hours: 1000 pairs of flexible footwear, or 1500 pairs of flexible footwear. Approximate weight: 236 kg.

#### 15/010 High-Speed Lockstitch Outsole Stitcher, Serial No. 03028/P 1

The machine is used for attaching leather and rubber soles to the welt or upper, employing two yarns to form a lockstitch. It is a high-speed machine, maintaining uniform, well tied stitches of good appearance. It will stitch any kind of footwear, from the lightest to the heaviest. Output in 8 working hours: When sewing heavy footwear, 550 to 400 pairs. Approximate weight: 350 kg.

# High-Speed Sole Screwing Machine, Serial No. 04113

The machine is used for attaching out-The machine is used for attaching outsoles to heavy leather boots (working and sking boots) by means of studscrews which the machine automatically cuts from a spool of helically grooved brass wire. Output: 110 studscrews per min. Adjustable screw length from 0 to 20 mm. Approximate weight: 375 kg. KOVO weight: 375 kg.



# 15/012

#### Universal Heel Attaching Machine, Serial No. 04222

With this machine any type of heel can be attached to footwear of all kinds. Hydraulic heel pressing force adjustable by hand wheel: 500 to 4000 kg. Output - according to kind of job - 900 to 2000 pairs in 8 hours. Approximate weight: 490 kg. KOVO

#### 15/013 Sole Edge Trimming Machine, Serial No. 04105

The machine is used for the edge trimming of men's, ladies' and child-ren's shoes with leather or rubber soles. Output of the machine in 8 hours: up to 500 pairs, according to the kind of footwear. Approximate weight: 292 kg. KOVO

#### 15/014 Sole Bottom Ornamenting Machine, Serial No. 04170

Output of the machine in 8 working hours: 1000 pairs. Heating element: 24 V, 180 W. Approximate weight: 185 kg. KOVO 185 kg.

#### 15/015 Rubber High Boot Vulcanizing Press, Serial No. 10707

The machine serves for pressing and vulcanizing high rubber footwear and similar footwear with a high accuracy and uniform quality. Pressure: 150,000 kg. Approximate weight: 2000 kg.

#### 15/016 Rubber Boot Edge Trimming Machine, Serial No. 10610

The machine is used for trimming of the surplus edges of rubber boots. Speed of the machine (maximum number of cuts): 2770 r. p. m. Approximate weight: 100 kg. KOVO

#### 15/019 Jet Loom P 45

The loom is built for weaving of light bandage-like cotton and spun yarn fabrics. The loom is of shuttle-less type. The shuttle picking motion is replaced by an air-jet, and weaving is effected directly from crosswound cones. Working width: 30 to 45 cm. Speed: 800 r. p. m. Input: 0.7 kW. Weight: 310 kg. KOVO

# Single-Cylinder Automatic Knitting Machine JDa-34

for the production of ladies' seamless stockings from polyamide fibres. Maximum output of the machine: 14 pairs in 8 hours. Number of needles: 400. Cylinder diameter: 33/4". Approximate weight: 250 kg.

#### 15/021 Double-Cylinder Automatic Knitting Machine D 2 Re

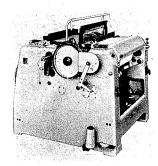
The machine serves for the manufacture of ladies' and men's socks, stockings and knee-socks. Electric mo-tor: 0.25 kW. Weight: 275 kg. KOVO

#### 15/022 Interlock Circular Knitting Machine, cylinder dia. 18"

The machine is designed for the manufacture of underwear from cotton, wool, cellulose, rayon or polyamide. A great number of knitting systems ensures a maximum output. Approximate weight of plain hosiery per shift: 20 kg. Input: 1.1 kW. KOVO

#### 15/023 Ring Frame for Wet Spinning of Flax, Type 0800

The Ring Frame is designed for the production of flax-line yarns, flax tow



yarns and their mixtures. Number of yarns and their mixtures. Number of spindles: 64. The standard type ma-chine has 192 spindles. Range of spun flax tow counts: 7 to 15 cm. Range of spindle speeds: 3500 to 6000 r. p. m. Input: 10 kW. KOVO

#### 15/024 Hydraulic Calender 4624

This five-roller calender is designed for handling light and medium light fabrics made of cotton, linen, rayon and various fabric mixtures, about 80 to 250 gr./sq. metre in weight. Two types are available:

a) Rolling calenders.
b) Friction calenders.
Working speed: 40 metres per min.
Maximum working width: 1000 mm.
Input: 26.5 kW. KOVO

#### 15/025 Metrical Yarn Wrap Reel

The apparatus is intended for quick and accurate measuring of yarn length and ascertaining its count. It is suitable for smaller test rooms. Dimen-



# Weaver's Knotter

Texter S Anotter
The apparatus increases productivity since it reduces the operating time in winding, warping and weaving. It ties reliably weaver's knots. Weight: 155 gr. PRAGOEXPORT

sions: 725×633×370 mm. Approximate weight: 18 kg. PRAGOEXPORT

The apparatus ascertains the degree of humidity of all textile fibres by means of an accurate drying method. Dimensions: 620×1010×1690 mm. Approximate weight: 180 kg. PRAGOEXPORT

Humidity Tester

### Textometer

The apparatus ascertains reliably the percentage of humidity of textile materials.

PRAGOEXPORT



# Recording Fabric Strength Tester The electrically driven Recording Fabric Strength Tester serves for ascertaining the strength and stretch of textile

fabrics, knitted materials, leather, wire and other materials. Dimensions:  $580\times2190\times460$  mm. Weight: 350 kg. PRAGOEXPORT

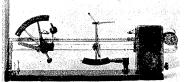
#### Ends Counter 50

Ends Counter 30
The apparatus is used for determining the number of yarn ends in a textile fabric pattern, 50 mm. in width. Dimensions: 110×60×50 mm Weight: 0.7 kg. PRAGOEXFORT

# Ends Counter 100

The apparatus serves for ascertaining the accurate number of yarn ends in a textile pattern, 100 mm. in width.

\*\*PRAGOEXPORT\*\*



# Hand Operated Twist Tester

The apparatus is used for ascertaining the amount of twist or the number of turns in single- or multifold-twisted yarn. Clamping length: 0—50 cm, or 0 to 20 in. Dimensions: 120\S20\S80 mm.

PRAGOEXPORT



Electrically Driven Twist Tester The apparatus is used for quick testing

and ascertaining the amount of twist of single- or multifold-twisted yarn. Infinitely variable speed range: 0 to 2000 r. p. m. in both directions. Dimensions:  $142 \times 343 \times 925$  mm. PRAGOEXPORT

#### Rotary Cloth Wear Testing Machine

Machine
The machine serves for ascertaining
the wear due to abrading of fabrics,
cloths, rugs, etc. Dimensions: 270×
520×580 mm. Weight: 59 kg.

PRAGOEXPORT

# Thickness Meter

The apparatus is used for measuring the thickness of fabrics, felt, leather, etc. with an accuracy of 1/100 mm. Dimensions: 120×160 mm. Weight 2.6 kg.

\*\*PRAGOEXPORT\*\*

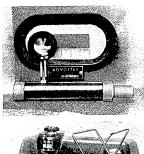
#### Isometer

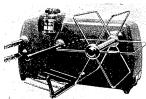
The apparatus ascertains the nonuniformity of sliver and roving. Dimensions 245×150×300 mm. Approximate weight: 15 kg. PRAGOEXPORT

#### Sample Bag

Sample Bag is a simple and reliable packing for the transport of textile samples which maintain their constant humidity. Dimensions: 80 mm in dia., length: 300 mm. Weight: 0.5 kg.

\*\*PRAGOEXPORT\*\*







#### Double-Wall and Double-Crown Knotter

for yarn winding and other technological processes. Dimensions:  $22\times63\times52$  mm. Weight: 125 gr. PRAGOEXPORT

15/026 Boxes - Textile Accessories

15/027

Automatic Loom F 44/1

The loom is designed for weaving cotton fabrics. Working width: 113 cm. Reed width: 120 cm. Speed: 190/200 r. p. m. Electric motor: 0.8 kW. Weight: 1850 kg. 1650 kg.

Model of a Complete Footwear

Factory

KOVO

16/029

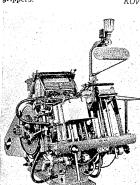
#### 16 GRAPHICAL MACHINES

KOVO

#### 16/029 MAXIMA-FRONT

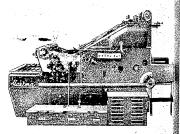
high-speed Automatic Letterpress Machine. Paper size: 56×76 cm. Output: 5600 prints per hour. Three forme inkers. The printed sheet is taken over from the cylinders by spring loaded grippers.

KOVO grippers.



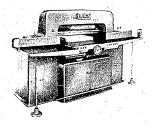
#### 16/030 GRAFOPRESS

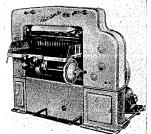
Automatic Platen Printing Machine, suitable for complicated multicoloured jobs. Paper size: 26 X 36 cm. Maximum output: 5000 prints per hour.



#### 16/031 MAXIMA MH 106

Hydraulic Paper Cutting Machine. The machine meets the highest require-ments. Width of cut: 106 cm. Hydraulic





16/032

cutting and clamping device. Double push-button photo-electric safety con-trol. Automatic strip cutting device. KOVO

#### 16/032 MAXIMA MH 78

Hydraulic High-Speed Guillotine. Hydraulic clamping and mechanical knife

motion. Double push-button safety control. Width of cut: 78 cm. KOVO

#### 16/033 MAXIMA-GUARDIAN

Disc Type Cleaner of matrices of lino-type or intertype setting machines. Output: 1800 kg per hour. The cleaner increases the service life of type setting matrices and reduces manpower.

KOVO

#### 16/034 Bench Type Line Saw

for accurate machining of type lines and typographic materials. Size of work table  $25{\times}25$  cm. KOVO

#### 16/035 Type Setting Matrices and Wedges MAXIMA

"Brno Z" printing type in bold type and incised italics. Menhart Triga with italics. "Kolektiv" book printig type in bold type and italics. Novelty: Editorial type with bold type and italics. Wedges for type setting machines.

KOVO

#### 17 BUILDING AND ROADMAKING MACHINES

#### 17/001 Road Roller NV 15 E

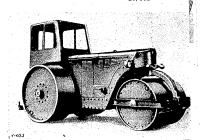
for building railway tracks, roadbeds and road embankments, gravelled roadways and airfields. It is provided with hand and hydraulic control. Roling width: 2400 mm. Working weight with counterweight: 15.000 to 18.000 kg. Skoda 4 S 110 engine. Average speed: 1.5 to 5.8 km./hr.

STROJEXPORT

#### 17/002 Road Roller NV 10 E

for building railway tracks, roadbeds and road embankments, gravelled, tarred or asphalt roadways and air-fields. Rolling width: 2050 mm.

Working weight with counterweight: 10.600-12.600 kg. Škoda 3 S Engine. Average speed: 1.5 to 4.5 km./hr. STROJEXPORT



#### 17/003 **Glazing Machine**

The AGO type automatic glazing machine serves for glazing wall-tiles.

\*\*TECHNOEXPORT\*\*

## Edge Mixer MiK 1500, dia. 1500

used for intense and periodical kneading of pulverised materials for the production of refractory bricks. The humidity of the processed materials must not exceed 15 p. c.

# Worm Press LŠ-355-1

used for moulding drawn ceramic mouldings of brick-clay.

STROJEXPORT

#### 17/004 Model of a Ceramic Factory TECHNOEXPORT



17/005

#### 17/005 Bitumen Sprinkler

for sprinkling the roadbed with bitu-men, tar or emulsion. Tank capacity: 7000 litres. Weight of empty truck: 3,000 kg. STROJEXPORT

#### 17/006

Concrete Mixer, 100 cu. metres per hour

per nour

Especially designed for continuous operation in construction plants of large scale industrial undertakings, buildings and water development schemes. Maximum output: 120 cu. metres per hour. Weight: 7300 kg.

STROJEXPORT

#### 17/007

### Concrete Mixer C 501

suitable for perfect mixing of the concrete mixture with an addition of a small quantity of water, such as for the production of prefabricated parts.

Mobile or stationary type. Output: 8 cu. metres per hour. Input 6.5 kW. Weight: 3800 kg. STROJEXPORT

#### 17/008

## Hollow Block Machine T 2

Output: 1000 to 1400 blocks per 8 hours. Input: 3 kW. Weight of the machine without compressor: 850 kg. STROJEXPORT

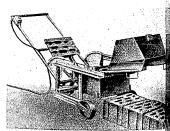
#### Rope Conveyor LT 1

for use with the hollow block press. It serves for conveying raw hollow blocks to drying chambers. Input: 0.4 kW. Weight: 800 kg.

STROJEXPORT

#### 17/009 Mortar Pump and Plastering Machine OB 4

New, improved design. Output: 60 sq. metres per hour. Input: 3 kW. Weight of the pump without hose and compressor: 730 kg. STROJEXPORT



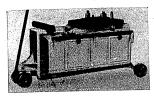
17/010

#### 17/010 Hand Hollow Block Machine RT 1

for the production of hollow blocks and prefabricated parts from light materials on a small scale. Daily output of one operator: 400 to 500 pces. Weight: 100 kg. STROJEXPORT

#### 17/011 Vibrating Screen VSM 1

for the removal of coarse grains in mortar. Weight: 150 kg. STROJEXPORT

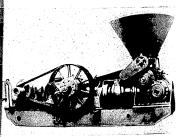


# Structure Steel Bending Machine

for bending structure steel, 40 mm. in dia on building sites. Weight: 1000 kg. STROJEXPORT

#### 17/014 Sectional Transporter DD 650/50

used for conveying sand and other loose materials. The sections are 1.5 metre long. Maximum output: 140 cu. metres per hour Input: 7.5 kW. Weight: 4200 kg.



#### 17/015 Concrete Pump CB 6

for conveying concrete mixture both vertically and in the horizontal plane.

17/015

Output: 6 cu. metres per hour. Input: 20 kW. Weight: 2800 kg.

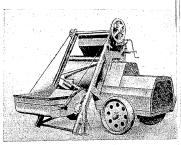
STROJEXPORT



17/016

#### 17/016 Concrete Mixer K 500

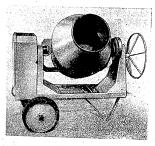
for mixing concrete mixture. Output with 15 mixtures: 7 cu. metres per hour. Input: 7.5 kW. Weight: 2950 kg. STROJEXPORT



17/017

#### 17/017 Mortar Mixer MM 250

for mixing mortar in larger quantities. The machine has been designed on the principle of forced mixing. Output: 4 cu. metres per hour. Input: 4.4 kW. Weight: 1500 kg. STROJEXPORT



17/018

for small indoor jobs and repairs. Out-put: 1 cu. metre per hour. Input: 0.8 kW. Weight: 366 kg. STROJEXPORT

Mobile Concrete Mixer H 65

#### 17/019 Concrete Mixer K 250

17/018

for mixing concrete on smaller building sites. Semi-automatic control. Output: 4 cu. metres per hour. Input: 4.2 kW. Weight: 1500 kg. - STROJEXPORT STROJEXPORT

#### 17/020 Pneumatic Ram PB 200

The ram serves for driving piles, 6 to 7 metres long and 150 to 250 mm. in diameter, into the bed of a river or soft, marshy ground as support for the foundations of a building or bridge. Air consumption: 0.8 to 0.9 cu. metre per min. Overall weight with accessories: \$7ROLEMPORT\$ STROJEXPORT

#### 17/021 Ram DB 45

for driving piles into earth as support for the foundations of a building or bridge. STROJEXPORT

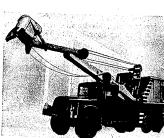


17/023

# Power Buggy MV 250

for transportation of sand, loose materials or liquids in a box which can be replaced by a platform of 500 kg carrying capacity. The buggy is driven by a double-stroke petrol engine. Capacity of the box: 250 litres, heaped 350 litres. Weight: 380 kg.

STROJEXPORT

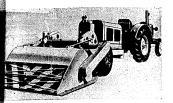


17/024

#### 17/024 Power Shovel D 030

mounted on the chassis of the Tatra 111 truck. The excavator is driven by an intependent Skoda oil engine. The individual mechanism can be replaced by various attachments. Shovel capacity: 0.35 cu. metre. Weight: 17,500 kg.

STROJEXPORT



17/025

#### 17/025 Soil Cutter PF 1900

for loosening and aerating soil or mixing materials in building roads and airfields. The machine is driven by an air-cooled oil engine. Weight: 3615 kg. STROJEXPORT

#### Zetor Super Wheel Tractor

is recommended for hauling the soil cutter. MOTOKOV



17/026

#### 17/026 Dumpear DC 5

for transportation of earth on building sites. The box which is mounted on the chassis of the Tatra 111 truck, has a capacity of 5 cu. metres or 6 to 7 cu. metres if piled. Hydraulic tipping mechanism. Weight: 9600 kg.

MOTOKOV



17/028

17/029

#### 17/028 Snow Plough SF

intended for removing snow drifts from roads and airfields. The snow is blown off by ventilators up to a dis-tance of 30 metres. Weight: 8100 kg. STROJEXPORT



# Grader PRAGA T S-6

used in road building and gravelling, surface dressing, building of embankments and slopes. STROJEXPORT

#### 17/030 Model of A Building Site

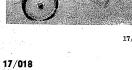
On the building site are models of excavators RY 1, locomotives and road rollers. STROJEXPORT

#### 17/031 Tank VLH, 10 T

used for transportation of pulverised bulk materials, such as cement. Pro-vided with overpressure discharging equipment. Capacity: 10 tons. Weight: 10,500 kg. STROJEXPORT



17/018



Mobile Concrete Mixer H 65

for small indoor jobs and repairs. Output: 1 cu. metre per hour. Input: 0.8 kW. Weight: 366 kg. STROJEXPORT

#### 17/019 Concrete Mixer K 250

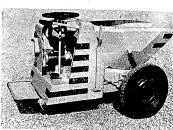
for mixing concrete on smaller building sites. Semi-automatic control. Output: 4 cu. metres per hour. Input: 4.2 kW. Weight: 1500 kg. STROJEXPORT

# Pneumatic Ram PB 200

The ram serves for driving piles, 6 to 7 metres long and 150 to 250 mm. in diameter, into the bed of a river or soft, marshy ground as support for the foundations of a building or bridge. Air consumption: 0.8 to 0.9 cu. metre per min. Overall weight with accessories: 245 kg. STROJEXPORT

#### 17/021 Ram DB 45

for driving piles into earth as support for the foundations of a building or bridge.  ${\it STROJEXPORT}$ 



17/023

# Power Buggy MV 250

for transportation of sand, loose materials or liquids in a box which can be replaced by a platform of 500 kg, carrying capacity. The buggy is driven by a double-stroke petrol engine. Capacity of the box: 250 litres, heaped 350 litres. Weight: 380 kg.

STROJEXPORT



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mounted on the chassis of the Tatra 111 truck. The excavator is driven by an intependent Skoda oil engine. The individual mechanism can be replaced by various attachments. Shovel capacity: 0.35 cu. metre. Weight: 17,500 kg. STROJEXPORT



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MOTOKOV



17/028

17/029

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STROJEXPORT



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#### 17/030 Model of A Building Site

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STROJEXPORT

#### 17/031 Tank VLH, 10 T

used for transportation of pulverised bulk materials, such as cement. Pro-vided with overpressure discharging equipment. Capacity: 10 tons. Weight: 10,500 kg. STROJEXPORT

#### 17/032 Truck for Loose Pulverised Materials with Overpressure Discharging Equipment

for transportation of pulverised bulk for transportation of purveises but materials, such as cement. Overpressure discharging equipment. Capacity: 40 tons. Weight: 32,600 kg.

STROJEXPORT

#### 17/033 Bulk Cement Reloading Station

for reloading bulk cement from special railway trucks to road trucks or other conveying equipment. STROJEXPORT

# Zetor Super Crawler Type Tractor with Share

for surface dressing and forestry jobs, such as road building in forests, etc. Weight with share: 4800 kg. MOTOKOV



17/035

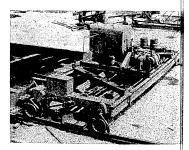
# 17/035 Universal Excavator with Dragline

Shovel capacity: 2.5 cu. metres. Input: 210 kW. Weight: 105,000 kg. STROJEXPORT



#### 17/036 Universal Shovel Excavator D 500

Drive by means of an oil engine. Shovel capacity: 0.5 cu. metre. Weight: 21.500 kg. STROJEXPORT



#### 17/037 Concrete Finisher FB 7.5

for building roads and airfields. Adjustable to three working widths. Drive by means of the Škoda 2 S 110 oil engine. Maximum working width: 7.5 metres. Weight: 7000 kg. STROJEXPORT

### 17/039 Cement Spreader

This cement truck attachment serves Inis cement truck attachment serves for accurate proportioning of cement in building roadbeds. Quantity of spread cement: 6 to 50 kg/sq. metre. Spread width: 2 metres. Weight: 700 kg. STROJEXPORT



#### 17/040 Automatic Sweeper ZSI-T 805

serves for sweeping streets, factory yards, bays, etc. Mounted to the T 805 motor truck chassis. The sweeping roller behind the rear wheels delivers the impurities into a collecting tank. Width of sweeped trip: 2 to 2.4 metres. Weight of empty car: 3100 kg. STROJEXPORT

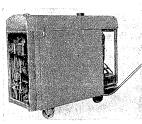


# Highway Strip Widening Roller

used for surface dressing of strips in widening roads, curbs, gutters and sidewalks. Drive by means of an oil engine. Output: 20 H. P. Weight: 4700 kg. STROJEXPORT

#### 17/043 Concrete Pump CB 12

used for conveying concrete on large building sites. Output: 12 cu. metres per hour. Input: 36 kW. Weight: 5000 kg. STROJEXPORT



17/044

#### 17/044 Hot-Air Generating Set

used for heating and drying of build-ings with hot air and flow heating of water for the production of mortar and concrete in winter. Thermal output: 120,000 Kcal/hour. Input: 4 kW. Weight: 920 kg. STROJEXPORT

#### 17/045 Concrete Mixer KM 10

for continuous production of concrete. The machine which is mounted on a two-wheel undercarriage can be hooked to any vehicle. Output: 10 cu. metrope hour. Input: 5.5 kW. Weight: 980 kg.

STROJEXPORT

#### 17/046 Continuous Weighing Equipment

for weighing fractions of cement during continuous mixing in large cement factories. This equipment is also suitable for continuous weighing during various chemical processes. Output: 50 tons per hour. Input: 1.2 kW. Weight: 1000 kg. STROJEXPORT

#### 17/047 Tank for Cement Spreader

mounted on T111 chassis. Also suitable for bulk cement. The tank is discharged by rippling. Capacity: 9.5 cu. metres. Weight: 9300 kg.

STROJEXPORT

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# INTERNATIONAL AGRICULTURAL FAIR • NOVI SAD

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20 Milliard dinars of business transacted

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# NOVOSADSKI SAJAM, NOVI SAD (YUGOSLAVIA)

Telephone: 21-98, 36-20, 43:05 Telegrams: SAJAM NOVI SAD

#### Surface Vibrator EVU 500

Same application as of 250 A EVU vibrator. Input: 1.1 kW. Weight: 65 kg. STROJEXPORT

#### Surface Vibrator EVU 1000

Application as above. Input: 2.4 kW. Weight: 96 kg. STROJEXPORT

#### 17/061 Immersion Vibrators PV 200 A

for vibrating smaller quantities of concrete. Also suitable for vibrating structures with steel strutts and high buildings. Input: 0.5 kW. Weight with accessories: 25 kg. STROJEXPORT

### Immersion Vibrator PV 500 A

Same application as of PV 200 A vibrator. Input: 1.6 kW. Weight with accessories: 73 kg. STROJEXPORT

#### 17/063 Universal Shovel Excavator D 100

A new type and design of a hydraulic dredger. Shovel capacity: 1 cu. metre.

#### 17/064 Crushing Set DS 20

A complete mobile crushing set.

#### 17/065 Rotary Valve Cement Packing Machine

17/066 Model of a Cement Factory

#### 17/067 Mortar Pump CM 6

for pumping mortar both vertically and in the horizontal plane. Output: 6 cu. metres per hour. Input: 7 kW. Weight: 680 kg. STROJEXPORT

#### 17/068 Locomotive BNK 30

Narrow gauge locomotive with oil engine for use in industrial plants. Gauge: 500 to 800 mm. Tractive force on hook: 1140 kg. Output: 30 H. P. Weight: 5400 kg. STROJEXPORT

#### 17/070 Pneumatic Concrete Pump

for concreting in mines, tunnels, etc. Tank capacity 370 litres, transport time of one charge 30—60 seconds. Length of of the delivery pipes up to 60 metres.

The periodical

# CZECHOSLOVAK FOREIGN TRADE

supplies information on the export products of all the sectors of the Czechoslovak industry. Reports on fairs and exhibitions, reports on trade policy and foreign press comments, supplement the contents of the richly illustrated periodical, issued six times annually in English, German, Russian, Spanish, Portuguese and French.

# 18 CONVEYING EQUIPMENT

#### 18/001 Travelling Conveyor with Rubber Belt

The conveyor is used for conveying loose materials on building sites and piece goods up to 10 kg in weight at a shorter distance and higher delivery height.

STROJEXPORT

#### 18/002 Bucket Elevator

intended for vertical transportation of loose materials. It consists of buckets, fitted to an endless rubber belt or chain. Speed of bucket: 1,15 metre per sec. Output 50 cu. metres per hour.

STROJEXPORT

#### 18/003 Mechanical Shovel with Double Hopper, Type MLP 2

used for transporting large quantities of materials, such as coal, coal-dust, sand, grain and lumps of coal up to 60 mm. in dia. Output: 20 to 40 cu. metres per hour. Maximum working range: 15 metres. STROJEXPORT

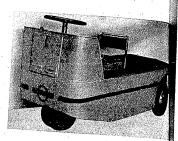
#### 18/004 Loader, Type Brom

intended for loading trucks with non-abrasive loose materials up to 60 mm. (light and crushable materials) or 50 mm. in granulation (heavy materials at a lower output) and loosened earth from heaps. Output: 50 to 80 cu. metres per hour. Forward travelling speed: 8.5 km./hr. or 2.4 metres per sec..

#### 18/005 Resonance Conveyor

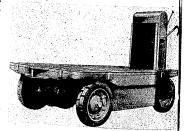
used for transportation of loose materials, such us moulding sand, steel chips, agglomerated sinter, ores, salpetre, etc. Output: up to 40 cu. metres per hour.

STROJEXPORT



# 18/008 Battery Tractor, Type AT 1521

used for transportation by means of trailers. It finds use in railway-stations, harbours, industrial plants and wherever trailers are preferred to other means of transport. Trailer loading capacity: 1500 kg. STROJEXPORT



#### 18/009 Platform Battery Truck, Type AP 522

This efficient vehicle is used for local transportation of all kinds of materials and goods in industrial plants, warehouses, railway-stations, harbours, etc. It is fast, very mobile, easy to manoeuvre, cheap in operation and maintenance and therefore economical. Rated capacity: 500 kg. STROJEXPORT

#### 18/010 Platform Battery Truck, Type AP 1522

This efficient vehicle is used for local transportation of all kinds of materials and goods in industrial plants, warehouses, railway-stations, harbours, etc. It is fast, easy to manoeuvre, cheap in operation and maintenance and therefore economical. Rated capacity: 1500 kg.

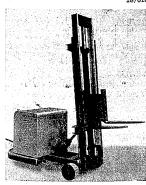
#### 18/011 Electric Battery Pedestrian Hand Operated Truck with Low Lifting Platform, Type ANR 511

This vehicle which is provided with its own drive, serves for conveying various kinds of materials and goods. The operator does not stand on the truck but he walks by, guiding the truck by the shaft. Rated capacity: 500 kg. Lift: 140 mm. STROJEXPORT

#### 18/012 Low Lift Electric Battery Truck, Type AN 1522

used for conveying all kinds of materials, goods, semi-products or finished products or specially adapted platforms or stands, in cases or vessels. Rated capacity: 1500 kg. Lift: 140 mm. STROJEXPORT

18/013

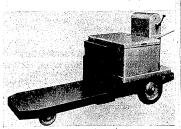




18/010



18/011



18/01

#### 18/013 Electric Battery Pedestrian Hand Operated Truck AVR 511

with high lifting forks and own drive.
The operator guides the truck by its shaft. Rated capacity: 500 kg. Lift: 5000 mm. STROJEXPORT

122

Barrier . .

18/009

#### 18/014 High Lift Fork Electric Battery Truck, Type AV 1522

serves for transporting all kinds of materials and goods in warehouses and factories up to a lift of 3 metres. Rated capacity: 1500 kg. Lift: 5000 mm. STROJEXPORT

#### 18/016 Petrol Driven High Lift Fork Truck, Type SV 1522

Truck, Type SV 1522

used for storing, joading, peletization or transportation of all kinds of goods and materials within short distances, especially in yards, well air-conditioned workshops, warehouses or on ramps. The operation of the petrol engine is not dependent on the length of the working shift. It is preferably used on sites where a charging station cannot be installed without difficulty. Rated capacity: 1500 kg. Speed: 15 km. per capacity: 1500 kg. Speed: 15 ed: 15 km. per STROJEXPORT

# 18/017 Portable Conveyor with Rubber

used independently or as a part of a conveying line in transporting small piece goods.

# Portable Slat Conveyor

used for conveying bags, cases and various piece goods. STROJEXPORT

Railway Wagon Shunter, Type 414

intended for shunting railway and other wagons on factory sites, sidings, railyards, etc.

# Overhead Runway Conveyor, Type Teleflex 455

for conveying piece goods.

STROJEXPORT

# 18/021 Flowroll Gravity Conveyor

used for an independent conveyance of piece goods, such as bags, cases, etc., or as a section element of linked track. STROJEXPORT



# 18/022 Worm Geared Chain Pulley Block, Type K 50 - 1 ton Weight: 24 kg. Approximate lift: 3 metres. Capacity: 0.5 ton. STROJEXPORT

#### 18/023 Brano Chain Pulley Block K 50 - 2 tons

Weight: 98 kg. Approximate lift: 3 metres. Capacity 2 tons. STROJEXPORT

# 18/024 Spur Geared Chain Hoist, 3.2 tons

New type. The lifting mechanism is carried in bearings. Approximate lift: 3 metres. Weight: 70 kg. Capacity: 3.2 tons.

### 18/025 Brano Pull Lift, 2 T

Weight: 22 kg. Lift: 1.35 metre. Capacity: 2 tons. STROJEXPORT

# Brano All Steel Lifting Jack, Type Z 20 - 5 t

Weight: 21 kg. Lift: 400 mm. Capacity: 5 tons. STROJEXPORT

# 18/027 Hydraulic Jack, Type CHZS - 25 t

with oil filling. Weight: 46 kg. Lift: 145 mm. Capacity: 25 tons. STROJEXPORT

# Low Lift Truck, Type NZV 1200

designed for use on factory sites and store-yards for loading or discharging all types of trucks, etc. Capacity: 1200 kg. Lift: 125 mm. STROJEXPORT

# Suspended Conveyor with Moving Rope, Type VZV 600

used for lifting and conveying goods in industrial establishments, warehouses, depots as well as for loading railwayand motor-trucks. Capacity: 600 kg. Lift: 1400 mm. Weight: 250 kg. STROJEXPORT

#### 18/030 Hoisting Platform, Type MSP 350

used in the construction of locomotives, boilers, turbines, heavy machine tools, airplanes, etc. Carrying capacity: 350 kg. Lift: 1500 mm. Weight: 470 kg. STROJEXPORT

# Hoisting Platform, Type MP 1500

serves for short distance transporta-tion and handling of loads up to 1500 kg. in weight. Also suitable for handling pressings, heavy fixtures, etc. STROJEXPORT

#### 18/032 Hand Crane RPJ 600

serves for lifting and short distance transportation of loads on straight and hard roads, in industrial plants, ware-houses, depots, repairshops, etc. Car-rying capacity: 630 kg. Lift: 1500 mm. STROJEXPORT

# 18/034

used for conveying or storing of piece goods or loose materials in bags, ca-ses, cartons, etc. Maximum carrying capacity: 1000 kg. Weight: 30 kg. STROJEXPORT

#### 18/035

Overhead Travelling Crane 50/8 t Remote controlled with short-wave transmitter. Main lift capacity: 50 tons. Auxiliary lift capacity: 8 tons. The crane is intended for carrying heavy loads.

STROJEXPORT

#### 18/036

Typified Crabs

of 5, 12 or 32 ton capacities, for use with overhead travelling cranes.

STROJEXPORT



18/037

#### 18/037 Mobile Crane HSC 4

designed for lifting and carrying loads up to 4,000 kg. in weight. Span: 6 metres. The crane is mounted on the undercarriage of the Tatra 111 truck. Capacity at a span of 6 metres, 4000 kg, 8,5 metres, 2500 kg. Weight: 11,500 kg.

#### 18/038 Building Crane SJ 16

suitable for a vertical conveyance of loads on building sites, store yards, etc. It consists of a bogie, column, jib, revolving frame, moving mechanisms, mobile counterweight and a pulley block with steel ropes. Capacity; 1000 kg, 2500 kg. Span: 16 metres, 6.4 metres. Lift: 16.5 metres, 29.3 metres. Weight of crane: at. 16 tons. STROJEXPORT

#### 18/039 Model of Earth Moving Machinery for large earth moving jobs

It consists of 1 type D 400 excavator, 1 two-section long distance belt conveyor, 2 belt conveyor spreaders. Output: 580 cu. metres of compact soil per hour.

TECHNOEXPORT

124

#### 18/040 Mechanical Shovel, Type MLP 1

serves for discharging or loading all types of loose materials up to 50 to 60 mm. in dia. It is supplied, if required, with hoppers for conveying materials or a hopper for discharging railway-trucks. STROJEXPORT

#### 18/041 Mechanical Shovel MLS 1

This stationary mechanical shovel ser-This stationary mechanical snovel serves for conveying large quantities of materials, such as small-sized coal, coaldust, sand or grain. Output: 10 to 25 cu. metres per hour. Weight: 306 kg. STROJEXPORT

### Special Adjustable Disc Type Feeder, diameter 1000

used for uniform feeding of heavy soil to the next conveyor. STROJEXPORT

# 18/043

20 ton Trailer

designed for transportation of heavy building machines on roads, and heavy loads in general. Capacity: 20 tons. Loaded area: 5000 × 2860 mm. Permissible speed with a fully loaded trailer: STROJEXPORT

# 18/044 "Orlik" Concrete Bucket

with pneumatic drive of closing devices, used for concreting the Orlik dam. Ca-

pacity: 20 tons. Span: 695 metres. Cu-bature: 6.5 metres. STROJEXPORT

#### 18/045 Set of Dust-Proof Apparatus for the Removal of Fly-Ash. Type TRA - IV

designed for hydraulic conveyance of fly-ash from boilers and separators to floating channels. STROJEXPORT

#### 18/046 Set of Roller Sections

The roller sections are a substantial part of a belt conveyor. The displayed roller sections are of light, heavy and self-adjustable type.

#### 18/048 Sectional Wheel Conveyor KD 2000

finds a wide field of application on factory sites, in warehouses, in loading and discharging railway- or motor-trucks, etc. Capacity: 100 kg. Length of section: 2000 m. Width of crossbar: 550 mm.

#### 18/163

# R-1 Electric Pulley Block

For smooth vertical transport of loads up to 250 kg or 550 lbs weight. With monkey carriage attachment suitable also for horizontal transport in workshops and storerooms; advantageous for building and maintenance purposes. Weight 42 kg or 92.48 lbs.

STROJEXPORT For smooth vertical transport of loads

#### FOOD-MAKING MACHINES 19 AND REFRIGERATING TECHNIQUE

#### 19/001 RAPID Beat Cutting Press

The machine removes excessive water from lixiviated beet cuttings by pressing them in a cylindrical strainer. By means of a revolving spindle the cuttings are pressed and water is extracted. Capacity: 3000 to 4000 q. of beet per 24 hours.

TECHNOEXPORT

#### 19/002 Suspended Beet Cutter

The cutter cuts washed beet into cut-The cutter cuts washed beet into cuttings, suitable for the extraction of diffusion juice. The sugar beet in the hopper basket is pressed by its own weight to the knives which are fixed in 16 knife holders. Capacity: 650 to 1050 tons per 24 hours.

TECHNOEXPORT

#### 19/003 Brewhouse

of a development test brewery. The pans which are made of steel or copper, are designed for an output of 80, 100 or 160 hectolitres. Double steam or fire heated pans have a capacity of 200 or 250 hectolitres. TECHNOEXPORT

#### 19/004 Design of the Brewery at Topolčany

TECHNOEXPORT

#### 19/005 Four-Roller Mill, Type MH

The machine which is provided with 1000/250/250 rollers, is intended for the grinding of all kinds of cereals, maize, sugar, salt, spices and chemi-cals. TECHNOEXPORT

#### 19/006 Laboratory Sifter

The machine checks the granulation of flour products and chemicals. By sifting 100 gramme samples the percentages of the various flour grades according to the size of grain, are ascertained.

TECHNOEXPORT

#### 19/007 Automatic Meat Mincing Machine, Model 112

Capacity: 1200 to 2000 kg. of minced meat per hour. Automatic feeding. The machine finds use in large butcher's or sausage-maker's shops. It works independently or in combination with other machines.

MOTOKOV

# Electric Bowl Meat Cutter, Model 127

with automatic emptying of the bowl. The machine is intended for large scale production of minced meat. Capacity of the bowl: 200 litres. Hygienic operation.

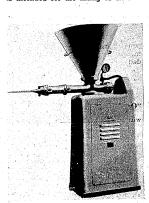
MOTOKOV



19/008

## 19/009 Vacuum Sausage Filling Machine,

for continuous operation. The machine is intended for the filling of all sorts



19/009

of sausages. It operates independently or in combination with other machines. The machine improves the quality of the products by 30 p. c. MOTOKOV

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#### 19/008 Electric Bowl Meat Cutter, Model 127

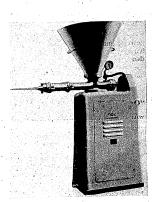
with automatic emptying of the bowl. The machine is intended for large scale production of minced meat. Capacity of the bowl: 200 litres. Hygienic operation. MOTOKOV



19/008

# Vacuum Sausage Filling Machine, Model 157

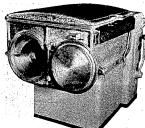
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19/009

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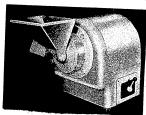
KM KM



19/010 19/010 Automatic Mixing Machine, Model 143

Model 143

The machine which has a capacity of 250 litres, is enclosed in a transparent jar which permits the observation of the working process. The mixed material is automatically discharged by opening the side plug during the rotation of the screw paddles. MOTOKOV



19/011 Disintegrator 131

The machine is used for the production of sausage-meat from fine chopped meat from boiled skins, tough meat and hash for liver sausages and pies, as well as for mincing fish and the preparation of hash for fish-pies. Approximate output: 5000 kg per hour. MOTOKOV

19/011

19/012 Meat Mincing Machine, Model 100 A

Diameter of cutting head: 82 mm. A spice grinding mill can be fitted to

the projecting end of the worm, and tightened by means of a flange.

MOTOKOV

Meat Cutter, Model 122 A

Bowl capacity: 45 litres. The machine is suitable for small butcher's shops. The machine is equipped with safety

19/014 Meat Mixer, Model 147

Capacity of the mixing tub: 50 litres.
The machine is designed for mixing hash by means of screw paddles. It provides an extremely easy operation, and finds use in small shops. MOTOKOV

19/015

Blood Separator, Model ŠKG 03

The machine serves for separating the blood-plasma from blood-corpuscles. Capacity: 300 litres per hour. Weight: 300 kg. Speed of drum: 5800 r. p. m. STROJEXPORT

Milk Tank

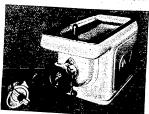
Capacity: 500 litres. Diameter: 1210 mm. Height: 1160 mm. 0.25 kW electric motor. About two hours are required for cooling milk 30 °C warm, to a temperature of ± 10 °C. perature of + 10 °C.

STROJEXPORT 19/017 Automatic Milk Weigher, Model 34-0

With aluminium tank, divided into two parts of 250 litres each. Capacity: 500 kg. The weigher is sealed to prevent vapour from penetrating its mechanism.

STROJEXPORT

19/012



19/018 Plate Type Milk and Cream Pasteurizer, Model PD 1000

Capacity: 10,000 litres per hour, i. e. 8500 litres of milk and 1500 litres of cream. Pasteurizing temperature of milk: 76 °C. Pasteurizing temperature of cream: 95 °C. The heated milk keeps its temperature for 35 seconds.

STROJEXPORT

Cream Separator, Model SMF 5

The machine is intended for cream separation, milk egalisation and purification as well as for the separation of butter-milk and whey. Capacity: 5000 litres per hour. 5.5 kW electric motor. Weight: 586 kg. STROJEXFORT

19/020 Butter Churn, Model 4 MV 400

The machine is a part of continuous line for the production of butter from biologically ripened cream with a fat content of 58 to 42 p. c. Output: 350 to 430 kg. of butter per hour, according to the fat content of cream.

STROJEXPORT

Stainless Butter Churn

Capacity: 3000 litres. Weight: 2775 kg. STROJEXPORT

19/022

Ripening Tank

The tank is designed for cream ripening and tempering prior to churning. Capacity: 3000 I.

19/023 Automatic Forming and Packing Machine, Model 12 MV

The machine handles butter or vegetable fats. Number of packages per min.: 25 to 28 250 gramme cubes: 400 kg. per hour 125 gramme cubes: 200 kg. per hour.

19/024 Carbonator - Filling Machine

The machine is designed for filling bottles saturated with carbon dioxide

(beer, soda-water, etc.), under pressure. Output: 9000 litres per hour: Input: 2.2 kW. Weight: 2800 kg. STROJEXPORT

19/025

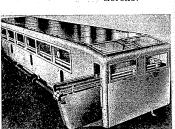
Battery Vacuum Cistern VAC 40

for the transportation of milk. Capacity: 400 litres.

MOTOKOV

19/026 Vacuum Cistern VAC 12

The vacuum cistern is designed for the transportation of milk into the dairy. Capacity: 1250 litres. Weight: 250 kg. MOTOKOV



19/027

19/027 Spray Cooler for Stewed Fruit

serves for continuous cooling or pasteurizing, or the two processes combined. In the canning industry it is used for cooling stewed fruit after sterilization, while it is employed for pasteurization cooling or a combination of the two processes in breweries, wine cellars and in cider production. Output: 1500 to 1800 1/1 kg. of stewed fruit bottles per hour, cooled down from 90°C to 30°C above zero.

STROIEXPORT serves for continuous cooling or pasteu-

19/028 Electric Three Compartment **Baking Cabinet** MOTOKOV

a dina

Plate Type Constant Freezer

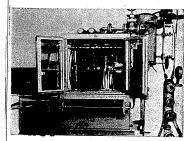
Plate Type Constant Freezer
The machine which is based on direct evaporation of ammonia and the forced feed circulation system of the refrigerant, is designed for the production of chilled food and meat in lumps, 25 kg. in weight and 150 mm. in height. Period required for chilling packages: 1½ to 2½ hours according to the kind of goods. Meat: 5 hours. Approximate weight: 4800 kg; weight of meat filling: 900 kg.

\*\*MOTOKOV\*\*

#### 19/034

Refrigerating Piston Compressor

The compressor is used for compressing the vapours of the refrigerant, i. e. of ammonia (NH<sub>3</sub>) or freon 12 (CCL<sub>2</sub>F<sub>2</sub>). Speed: 960 r. p. m. MOTOKOV



William Kill

Freon Condensing Units

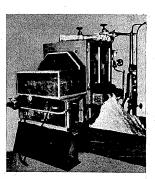
The units are provided with V series water-cooled condensers, and use freon F 12 as a refrigerant. They are of two-or four-cylinder type, with pistons and enclosed crank case.

Type	V 421	V 540	V 68	V 7175
Output in kcal p. h Net weight in kg.	2100 160	4000 270	8000 470	17500 790
			MOT	OKOV

19/038

Refrigerator Show Case for Self-Service CVSd 630

suitable for shops with self-service. Plastics and all modern design features find a wide field of application in this type of refrigerator. Useful capacity: 630 litres. Size: 2.5 sq.metres.



19/035

#### 19/035 Crushed Ice Plant

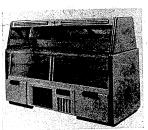
Maximum capacity: 270 kg. per hour. The plant is connected to an ammonia or freon refrigerating circuit (generating set). The briquette-making attachment moulds the crushed ice into MOTOKOV briquettes.

#### 19/036 Automatic Multiple Production

used with refrigerating equipment. MOTOKOV

19/037





#### Double Refrigerator Show Case for Self-Service MVSd

for use in shops with chilled meat, fish, poultry, vegetables, fruit, etc. Show case temperature: 5 to 10 °C below zero. Temperature in the bottom part: 15 to 18 °C below zero. Useful capacity: 480 litres: Size: 1.5 sq. metre.

#### 19/039 Refrigerating and Chilling Trailer PM 34

for long distance road-transportation of chilled goods. The temperature which can be adjusted to 20 °C below zero (at a maximum ambient temperature of 27 °C), is automatically maintained with an accuracy of plus minus 2 °C. Cooling space capacity: 54 cu. metres, 17.9 sq. metres. Approximate weight: 19,400 kg. MOTOKOV

#### 19/040 Automatic Electric Regrigerator SA 900

Plastics enter in the construction of this refrigerator of entirely new de-sign. Capacity: 900 litres. Cooling spa-ce: 1.8 sq. metre. MOTOKOV

# Display Counter CS 630

This, new type of display counter finds use in shops, kitchens, etc. It is used for cooling all kinds of food and beverages. Outer dimensions: Length 2160 mm, width 850 mm, height 920 mm. Capacity: 490 litres. Cooling space: 5 sq. metres.

#### Wall-Mounted Refrigerator Show Case for Self-Service MVS 900

for use in self-service shops. Capacity of refrigerator crates: 900 litres. Size: 3 sq. metres. MOTOKOV



#### 19/042 Hermetic Condensing Unit, M Series

This air-cooled (air-compressor cooled) unit uses freon F 12 as refrigerant. In combination with the respective refrigerator and regulating instruments, it is used with automatic electric refrigerators. It is suitable for refrigerator cases, smaller cooling chambers, walk-in coolers and special refrigeration equipment. Maximum capacity: 2000 kcal. per hour. MOTOKOV

#### 19/043 Walk-in Cooler

MOTOKOV

# 19/044 Universal Mixing and Kneading Machine, Type "Š 2"

The machine mixes and kneads dough and whisks eggs, cream, mashed potatoes, etc. It is suitable for kitchens catering for 500 people. By means of auxiliary attachments it is possible to use the machine for coffee or poppy-seed grinding, meat mincing, cutting, grating or straining. MOTOKOV

## Potato Peeling Machine KŠP 180

The machine eliminates the hardest kitchen job and provides important economies in manpower. It is also suitable for handling various vegetables, such as carrots, turnips, cellery and other tuberous produce. This type of machine has a capacity of 180 kg, per hour. The KSP 400 type machine has a capacity of 400 kg, per hour. MOTOKOV

### 19/046

"Calex" Electric Compressor Refrigerator of 100 or 200 litre capacity MOTOKOV

#### 19/047 ELEKTROSVIT Absorption Refrigerator

The refrigerator is provided with an absorption diffusion refrigerating set with continuous circulation. A mixture of ammonia, water and hydrogen is used as refrigerant. At a low temperature ammonia evaporator, absorbing heat and cooling down the absorbing heat and cooling down the surroundings.

### 19/049

Thermo-Case TB 20

Thermo-Case Is an independent portable unit, designed for transporting or storing of transitusion blood at a temperature of 2 up to 4 °C above zero, and maximum ambient temperature of 25 °C above zero. With ice-bags completely filled with fractional or crushed ice, the temperature is preserved for 48 hours.

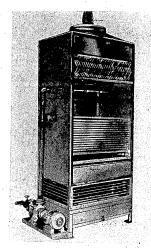
MOTOKOV

Mobile Crushed Ice Plant

This ice plant of entirely new design This ice plant of entirely new design is intended to produce large quantities of crushed ice. The ice is used in food, meat, chemical, pharmaceutical and textile industries. Output: 250 to 270 kg. of crushed ice per hour.

Hypothermic Apparatus

The apparatus is designed to reduce the patient's temperature by means of an automatic or hand controlled freon cooling equipment. At a lower body



temperature the most difficult operations of the heart or other organs can be carried out. MOTOKOV

**Evaporative Condenser Unit** 

The unit is used for condensing the where water is not available. It provides a considerable economy in cooling water. Capacity: 17,000 kcal, per hour

### Oil Pressure Control Device

The device interrupts the operation of the retrigerating ammonia compressor when the overpressure of the lubricant drops below a given limit. MOTOKOV

### 19/055

MOTOKOV

Pressure Regulating Valve

The pressure regulating valve is inserted in the inlet ammonia piping in order to maintain a constant evaporating pressure in the evaporator. When the pressure rises, the valve opens, when the pressure drops, the valve closes. Weight: 7.5 kg. MOTOKOV

Suction Line Valve placeds nick and

for the control of suction lines of large evaporators. Weight 4.3 kg. MOTOKOV

### 19/057 Automatic Hydraulic Valve

The valve controls the water supply The valve controls the water relation of a refrigerating condenser in relation to condensing pressure. Pressure range: 5 to 17 atm. Weight: 2.50 kg.

MOTOKOV

### 19/058 Overpressure Control Valve, Type PJA

The valve is designed to avoid over-pressure in the high-pressure part of the ammonia refrigeration equipment. The operation is automatic. MOTOKOV



### 19/059-061 Room Thermostat, Type PT 1, PT 2, PT 3

The room thermostat is intended for automatic switching on or off of electrical equipment in relation to the ambient temperature. Weight: 1.45 kg. MOTOKOV

### 19/062 Relief Valve JV 1 and JVA 1

The valve protects the refrigerating equipment against overpressure. When

the pressure rises, the valve opens and the refrigerant is released. Working pressure: 16 or 20 atm. MOTOKOV

### 19/063 Fitche's Measuring Apparatus

for measuring thermal conductivity under unstable conditions. Weight: 60 kg. MOTOKOV

### 19/064

Diagrams and Pictures

of exported sugar mills.

TECHNOEXPORT

### 19/065

Designs of Flour Mills

### TECHNOEXPORT

19/066 Model of a Grain Silo



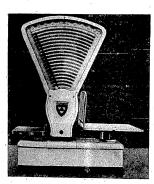
### 19/067 Line for the Production of Pastry

made of wheat-flour, such as buns, rolls, etc. The working process is automatic from the delivery of the risen dough into the hopper of the t-605 dough toughening machine down to the forming process. Output: 7200 pces. STROJEXFORT

### 19/068 Bridge Scale 14-2

Capacity: 200 kg.

MOTOKOV



19/069 Bench Scale 13-4

Two scales. Capacity: 20 kg. MOTOKOV

19/069



19/070 Bridge Scale 14-0

a chi eli

Round dial. The scale is put on the table. Capacity: 30 or 50 kg.

MOTOKOV

19/072 Model of a Three-Floor Bakery STROJEXPORT

19/073 Continuous Pastry Forming Machine

The machine is a part of the pastry production line.

STROJEXPORT

### 19/074 Walk-in Refrigerator

Capacity: 6 cu. metres. Useful working space: 2.7 sq. metres. Quantity of stored goods: 600 kg. MOTOKOV

19/082 Vibratory Separator for Precleaning

The separator is used for precleaning grain in granaries. Output: 32 tons of wheat or rye per hour. Width of screens: 1250 mm. STROJEXPORT

19/083 Cross Beating Mill SU 4

The high-speed cross beating mill is used for milling cereals, sugar, salt, saltpetre, wood-powder and various chemicals. Diameter of milling chamber: 600 mm. STROJEXPORT

19/085 Three-Cylinder Gutcasing Cleaning Machine, Model MH 191

The machine is designed for cleaning beef casings. Capacity: 40 to 60 casings per hour. Weight: 392 kg. MOTOKOV

19/086 Seven-Cylinder Gutcasing Cleaning Machine, Model MV-195

The machine cleans rapidly and precisely fine pork and mutton casings. All impurities, slime and grease are thoroughly removed, and the casings leave the machine thin and transpraent. Capacity: 700 pork casings per hour. 70 mutton casings per hour. Weight: 573 kg.

MOTOKOV

19/087 Band Type Machine for the Removal of Cherry Stems

The machine is designed for removing the stems of both fresh and tinned cherries. Output: 7 q. per hour. Weight 550 kg.

MOTOKOV

### 19/088 Bun Forming Machine PK 100

Maximum capacity: 10,000 buns per hour. Size of buns: 53 or 80 gr. Weight: 85 kg. MOTOKOV

19/089 Baking Plate Scraper

The machine is designed for cleaning and oiling baking plates with folded up edges. Maximum capacity: 1500 plates per hour. Width of plates (any length will do): 475 mm. Consumption of edible oil: 1 litre per hour. Weight: 520 kg.

MOTOKOV

19/090 Vegetable Slicer R 55

The machine serves for cutting hard vegetables into cubicles, strips or slices. Maximum capacity: 1500 kg. per hour. Weight: 263 kg. MOTOKOV

19/091 Self-Priming Pump

The pump is designed for handling milk and milk products. All parts of the pump proper are tinned both inside and outside. Capacity: 10 000 litres per hour. Weight: 65 kg. MOTOKOV

19/092 Automatic Weighing, Measuring and Registering Machine JOKA A-1

The machine is used for weighing or measuring of loose and granulated materials, liquids, etc. as well as for the control of machines which are technologically dependent on the weighed

or measured quantities. The measured quantity can be charged in one lot or by instalments.

MOTOKOV

19/093 VULKAN Mixer, Type 430

The machine is used for mixing dough especially in large bakeries. Capacity of kneading-trough: 430 litres. Weight: 1700 kg.

MOTOKOV

19/094 Flour Sifting Machine KPM - I/3000

The machine is used in large installations for flour sifting, loosening, aerating and clod breaking as well as for removing all impurities. Weight: 450 kg. Output: 3000 kg. per hour. MOTOKOV

19/095 Small Flour Sifting Machine MPZ-I-300/2500

The machine is used for flour loosening, sitting and aerating or clod breaking. Output: 2500 kg. per hour. Weight: 550 kg. Weight with charged bin: 850 kg. MOTOKOV

19/105 Milk Bottle Filling Apparatus

for smaller dairies. Fills five bottles at the same time when the foot pedal is depressed.

Washing Device for cheese boards.

MOTOKOV

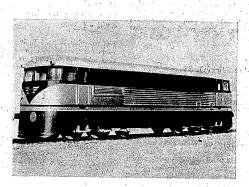
There are servicing depots with the greatest possible variety of spare parts in more than 120 states on the continent as well as overseas which is a guarantee of safe riding.

#### 20 LOCOMOTIVES AND TRUCKS

### 20/001

### Diesel-Hydraulic Locomotive

Output 400 H. P. 1435 CN 400. This Diesel locomotive is especially designed for shunting service in industrial plants. It can also be used on local lines for shunting and transportation of medium-heavy goods trains. Axle arrangement: 0-6-0. Gauge: 1435 mm. (48½"). Continuous rating: 410 H. P. at 1360 r. p. m. Maximum permissible speed: 25 km/hr. Weight of the locomotive in full trim: STROJEXPORT



# 20/002 Diesel-Electric Locomotive Co-Co, Output 1650 H. P. - T 698.0

The locomotive is intended for passenger express service at a maximum speed of 120 km./hr. or, with a modificated ratio, for goods service at a speed up to 85 km./hr. The Co-Co locomotive has six driving axles arranged in two bogies without pinions. All axles are driving axles. Axle arrangement: C-Co. Gauge: 1435—1676 mm. Continuous tractive force for passenger service: 15,850 kg. Continuous tractive force for goods service: 19,500 kg. Maximum rating: 1650 H. P. Weight of the locomotive in full trim: 105 tons.

STROJEXPORT

### 20/003

### Electric Locomotive 21E for Open Pits

The locomotive is designed for open pits; it consists of three parts, each part forming an independent power unit. Electropneumatic control. A special device permits the locomotive to be driven at a very low speed, and ensures a continuous loading of trucks under excavators: Axle arrangement: Bo+Bo+Bo. Overhead wire voltage: 1500 V d. c. Total output: 1560 kW. Maximum speed. 65 km./hr. tractive force: 45 tons. Total length of the locomotive: 21,000 mm. Minimum radius curvature: 60 metres. Overal weight: 150 tons. STROJEXPORT

### Diesel-Electric Locomotive, Bo-Bo Type, Output 750 H. P. - T 435.0

The locomotive is intended for light and medium light shunting or goods service up to a maximum speed of 60 km/hr. It is suitable for passenger service if the heating of coaches from the locomotive is not required. It is provided with a device for train traction by means of two coupled locomotives from a single driver's post. Only two locomotives which are identical in design can be coupled. Axle arrangement: Bo-Bo. Gauge: 1435 mm. (4'8'/2") and 1678 mm (5'6'). Rating: 750 H. P. Tractive force at an adhesion coefficient of 0.25:14,000 kg. Weight of the locomotive in full trim: 59 tons.

STROJEXPORT

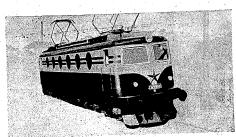
## Four-Cylinder Vertical High-Speed Steam Engine 4 SP 260

The engine especially finds use in the food-industry, textile and paper mills, breweries, flax scouring mills and other plants where steam is used for heating purposes. Number of cylinders: 4. Maximum pressure of incoming steam with exhaust: 14 atm. Output at maximum pressure: 400 H. P. Speed: 600 r. p. m. STROJEXPORT Weight: 5.3 tons.

## Eight-Wheel Express Coach without Compartment, Type Bai

The coach has fine, upholstered seats which can be revolved and tilted to meet the passengers' requirements. All seats are located in one compartment. The enlarged windows are firmly in-built, and air-circulation is ensured by forced ventilation. The coach is heated with hot water, supplied from a special electrical or steam exchanger. The appearence of the coach is enhanced by fluorescent lighting and wall panelling in pastel shades. Length of coach over buffers: 23,500 mm. Number of seats: 64. Weight with bogies with guides: about 36.5 tons. STROJEXPORT

### 20/008 Eight-Wheel Hopper Balast Car Vsa



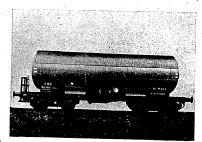
### 20/009 Eight-Wheel Hopper Balast Car for Egypt

The car is used for transporting gravel, limestone, ores or sand. Loading capacity: 40 tons. Length 11,006 mm. STROJEXPORT

### 20/010 Eight-Wheel Universal Covered Truck, Type 1-420.1

The truck is especially designed for the transportation of grain or legumes; therefore, discharge chutes, provided with removable flaps, are built in the underframe. The truck is filled through charging flaps in the two side-walls and charging holes in the roof.

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\*\*TROJEXPORT\*\*

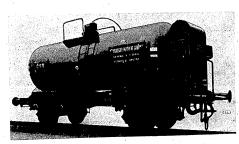


20/011

### 20/011 Eight-Wheel Tank Wagon, Capacity 560 hectolitres

This eight-wheel wagon of Ra series with a 560 hectolitre barrel, tested for 25 atm., is intended for the transportation of liquid ammonia and propane-butane. Working pressure at a maximum temperature of 40  $^{\circ}$ C 16 atm. The filling and discharging is carried out by means of valves, located on the bottom of the barrel where the dearating equipment is also provided.





20/012

### 20/012 Four-Wheel Tank Wagon, Capacity 240 hectolitres

A four-wheel tank wagon of R series with a barrel and a capacity of 240 hecto-litres. The wagon is used for the transportation of thick oils and tars. For this purpose it is provided with a discharging device, 150 mm. in dia., cover heated drain pipes and a closing valve. The inside of the drum is equipped with heating elements having a heating surface of 21 sq. metres.

\*\*STROJEXPORT\*\*

#### 20/013 Auxiliary DAKO D and DAKO CV Triple Valve

The DAKO CV triple valve is used with brakes of railway coaches and trucks. It meets the conditions of the International Railway Union (UIC) prescribed for air brakes. Together with the DAKO D auxiliary valve, the CV triple valve is suitable for braking loaded trucks.

#### 20/014 DAKO Brake Model Diamond Bogie

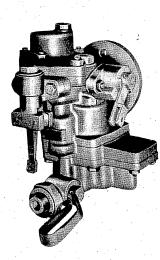
A high transmission speed of DAKO brakes of 288 metres per sec. ensures a smooth braking of the train. The brake which is almost inexhaustible, is characterized with an excellent resistance to overcharging. Its maintenance is easy.

STROJEXPORT

### 20/015 New Type Bogie for Railway Trucks

A bogie of welded construction for eight-wheel railway trucks. Suitable for speeds of 100 to 120 km/hr. Weight of bogie: 5000 kg. STROJEXPORT





### Model of an Eight-Wheel Motor Car of M 230.4 Series

Model of an Eight-Wheel Motor Car of M 250.4 Series

The car which is designed for local passenger traffic, is 18.5 metres long, 28 tons in weight and has 56 seats with a luggage compartment. Maximum speed 70 km/hr. It is driven by a horizontal, air-cooled, twelve-cylinder Tatra 1 930 KF Diesel-engine. The car is heated with hot air, and lighted by means of fluorescent tubes. Vans can be coupled to the motor car which are identical in design.

STROJEXPORT

### Model of a Suburban Electric Four Car Unit

The unit is used for rapid passenger service on electrified lines in the vicinity of large cities. Length of the unit: 95 metres. Weight: 174 tons. Seating capacity: 308 seats and two luggage, compartments. Maximum speed: 100 km/hr. Output: 8 traction motors, 1200 kW, overhead wire voltage of 3000 V. Each car is provided with a driving bogie, located at the same end as a pantograph.

STROJEXPORT



### 20/018

## Electric Universal Overhead Wire Locomotive of E 499.0 Series

This locomotive is used with all kinds of trains. It has two bogies, and its own weight provides the adhesion weight. Electro-pneumatic control for a voltage of 48 V, pressure of 3.5 atm. Axle arrangement: Bo-Bo. Voltage: 3000 V. Maximum permissible speed: 120 km./hr. Output: 2344 kW per hour. Length of the locomotive: 15,800 mm. Adhesion weight: 80 tons.

STROJEXPORT

### Trolley-Bus, Type 9Tr

This four-wheel trolley-bus has a self-supporting three-door body with transversal seats. The new bodywork is smaller in weight as compared with the old type. Panoramatic front and rear windows. Foreign excitation electric brake. Normal carrying capacity: 70 persons; maximum 100 persons. Maximum speed: 60 km/hr., standard 110 kW four-pole motor.

STROJEXPORT



### 21454 S H I P S

### 21/001 Shaft Guide

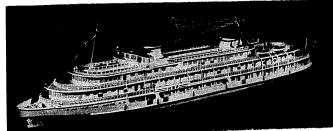
# It consists of the propeller, pipe, propeller shaft, bushings and propeller cover. The shaft guide is made of POLIEV 5 steel and non-ferrous metals. TECHNOEXPORT

### 21/002 Capstan

#### Electric drive with electro-magnetic or TECHNOEXPORT hand braking.

## New Three-Deck, Three-Propeller 1200 H. P. Passenger Motor-Boat

This passenger motor-boat is intended for transportation of passengers and goods on rivers and lakes. Steel, allwelded construction. The motor-boat is driven by three motors which are provided with turbo-blowers. Fully automatic operation. Maximum length: 96.51 metres. Maximum width: 14,98 metres. Approximate speed: 25 km./hr. Number of passengers: 421. Crew: 70. Tonnage: 1468 tons.



21/003

21/004 Model of MOL 1200 Engine-Room TECHNOEXPORT

### 21/006 Panels, Photographs, Reliefs TECHNOEXPORT

From the periodical

# CZECHOSLOVAK FOREIGN TRADE

you can learn about the products you have not seen at the exhibitions. The periodical appears three-times a year in six languages and contains information on the export products of all branches of the Czechoslovak industry.

#### 22 PUMPS

### Centrifugal Boiler Feed Pump SIGMA H-VN-2/x-HD

designed for supplying boilers with designed for supplying boilers with treated hot or cold water, condensate repumping in boiler economy as well as for handling other liquids at higher temperatures, and pressures. STROJEXPORT

### 22/002 SIGMA H-VA-125/III-FT

designed for feeding water to steam boilers up to a temperature of 210 °C, condensate pumping in boiler economy, etc. Capacity: 1700 litres per minute. Total manometric delivery head: 290 metres. STROJEXPORT

### 22/003 Steam Piston Pump J 250/175/150 in dia.

used for supplying boilers with water, as a mine pump and for pumping water up to a temperature of 120 °C. Capa-city: 500 litres per minute. STROJEXPORT

### 22/004 SIGMA SLS-8

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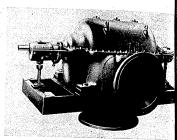
This vertical diagonal pump for dry sumps is used for handling clean or slightly poluted water, for cooling systems as well as for repumping stations of waste and industrial waters, etc. Capacity: 60,000 to 102,000 litres per min. Total volumetric delivery head: 10 to 20 metres. Dia of neck: 800 mm. STROLERPORT 800 mm. STROJEXPORT

#### 22/005 SIGMA SF-800

This spiral casing horizontally split centrifugal pump with two parallel impellers and inlets on both sides, is used as a cooling pump for steam turbines in large thermal power plants.

Capacity: up to 120,000 litres per min. Total volumetric delivery head: up to 221metres.

STROJEXPORT



### 22/006 SIGMA K-800

SIGMA A-800 spiral casing horizontally split centri-fugal pump is suitable for condensers of large steam turbines. Capacity: 85,000 litres per min. Total volumetric delivery head: 25 metres. STROJEXPORT

### 22/007

### SIGMA TH-VG-7/I-K

SIGMA TH-VG-7/I-K
hot water circulation pump for working
temperatures up to 180 °C is suitable
for heating plants, industrial or long
distance heating systems, oil and other
industries. Capacity: 400 cu. metres per
hour. Total, volumetric delivery head:
33 metres. Speed: 1450 r. p. m.
STROJEXPORT

### 22/008 SIGMA 65/65-F/2

SIGMA 65/65-F/2
is a high-pressure hot water circulation centrifugal pump, designed for hot water circulation in a system of boiler tubes, or for long distance heating with water up to 260 °C. Capacity: 28 cu. m. per hour. Total volumetric delivery head: 40 metres of w. col. Maximum working pressure: 52 kg/sq. cm.

37/000

### SIGMA DDP-14/60

SIGMA DDF-14/60
This high-pressure double plunger horizontal dosing pump is intended for pumping and dosing of small quanties of liquids (chemicals). Maximum capacity: 57 litres per min. Total volumetric delivery head: 100 atm.

STROJEKPORT

STROJEXPORT

### Single-Plunger Vertical Dosing Pump of SDEP 16/30 Series

Pump of SIJER 16/30 Series designed for dosing various chemicals and non-saturated solution af salts of a maximum viscosity of 2 to 3°E up to a pressure of 25 atm and a temperature of 100°C under dustproof contacts of the same of the same of 100°C under dustproof contacts. ditions. Maximum capacity: 32 litres per min. Total volumetric delivery head: 25 atm. STROJEXPORT

### 22/011 SIGMA CCn-80/XII-SP

High-pressure centrifugal boiler feed pump up to a temperature of 200 °C. Capacity: 45 tons per hour. Total vo-lumetric delivery head: 68 atm. STROJEXPORT

### SIGMA NBB-250

A single-stage spiral casing dredger type centrifugal pump for hydraulic conveyance or extraction of hard, loose materials (dross, slag, ash, gravel, sand, the foreigner comment in etc.), for the deslagging equipment in power plants or heating plants as well as for conveying sludge in ore dressing plants, aluminium plants, cement fac-tories, etc. Capacity: 5000 to 11,000 litres per min. Total volumetric delivery head: 60 to 48 metres.

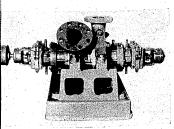
STROJEXPORT

### SIGMA TT-VL-3/II-D

Adouble-stage centrifugal pump designed for handling hot oils up to a temperature of 300 °C and volatile liquids in the chemical industry. Capacity: 250 litres per min. Total volumetric delivery head: 12 metres. STROIEXPORT

STROJEXPORT

22/014



### 22/014a SIGMA TT-VN-6/II

A double-stage centrifugal pump designed for handling hot oils up to a temperature of 300 °C and volatile liquids in the chemical industry. Capacity. 1700 litres per min. Total volumetric delivery head: 56 metres.

STROJEXPORT

### 22/015 SIGMA P-ZUV-4

A medium-pressure rotary gear pump designed for supplying oils, crude oil, petroleum and other viscous liquids the lubricating systems of various machines and equipment, suitable for oil hydraulic drives, etc. Capacity: 23 litres per min. Working pressure: 20 atm. Speed: 920 r. p. m. STROJEXPORT

## **SIGMA HT 16/8**

A high-pressure oil pump, designed for handling oil where high pressures are required for a small quantity of the pumped liquid Maximum capacity: 10.4 litres per min. Total volumetric delivery head 20—140 atm...

STROJEXPORT

### SIGMA BVA-5/X+X-OHD

A heavy-duty double-casing mine pump with a common driving motor in the centre for the main high-pressure pumping stations in bituminous coal and ore mines. Capacity: 800 to 1400 litres per min. Total volumetric delivery head: 630 to 560 metres.

STROJEXPORT

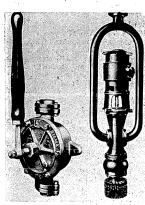
#### 22/018 SIGMA VR-VA-2a/VII

SIGMA VR-VA-2a/VII

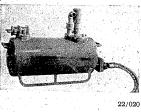
A vertical sinking pumping set with a pump enclosed in a steel frame, suitable for dewatering flooded mines or deepening shafts characterized with a considerable fluctuating water level. Capacity: 250 litres per min. Total volumetric delivery head: 95 metres. STROJEXPORT

### 22/019 SIGMA VP-VN-2/VI

A vertical sinking pumping set with a pump designed for drainage operations, dewatering shafts or boring wells on building sites. Capacity: 350 litres per min. Total volumetric delivery head: 108 metres. STROJEXPORT







### 22/020 SIGMA NORA

A portable pneumatic pump for com-pressed air drive, without rotating parts, with automatic plunger adjust-ment, suitable for mines. Capacity:

50 to 175 litres per min. Total volumetric delivery head: 45-8 metres. STROJEXPORT

### 22/021 RUBINA Pneumatic Pump

This portable centrifugal spiral casing pump is designed to handle mine water. Capacity: 250 litres per min. Total volumetric delivery head: 6-50 atm.

STROJEXPORT

#### 22/022 SIGMA - 2-FSK Diaphragm Pump

This portable pump is designed for handling mine water. Capacity: 400 litres per min. Total volumetric delivery head: 5 atm. STROJEXPORT

### 22/023-024 SIGMA KDD and IDD Duplex Horizontal Piston Pumps

Steam or compressed air operated pumps without crank mechanism. They are used for feeding steam boilers and conveying clean, industrial or mine water and other statements. ter and oils.

### 22/026 SIGMA LPV 4"×6"

a heavy duty pump designed to operate under difficult operating conditions, especially used as a drilling pump for deepening crude oil bore-holes and other bore-holes. STROJEXPORT

### 22/027 SIGMA OL-20 Pump

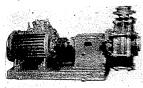
suitable for handling oils and other viscous liquids up to a temperature of 80 °C.

### 22/028 SIGMA CH

22/028

A single-stage spiral casing centrifugal pump, designed for priming acids and lyes in the chemical industry. Pumps of this type are made in castinon, cast-steel, bronze, lead, stainless steel or fersilite as well as rubberlined and of ceramic materials according to the kind of liquid pumped. Capacity: 60 to 4500 litres per min. Total volumetric delivery head: 7 to 75 metres.

\*\*TROJEMPORT\*\* STROJEXPORT



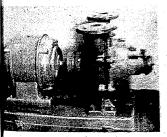
22 (22)

### SIGMA BUC-6a-FESI Single-Stage Centrifugal Passap

without gland, for handling ariss and lyes as well as other horness read in the chemical industry. Capacity: 504 repose per min. Delivery Handl 14 to 30 metres.

#### 22/030 SIGMA W-CH-4

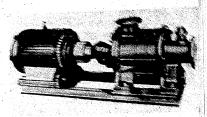
A single-stage spiral casing contribu-gal pump for acids and lyes, used in the chemical industry. Capacity: 100 to 500 litres per min. Total withmetric delivery head: 52—10 metres. STROUERFORT



22/031

### 22/031 SIGMA RV-448

A single-stage water ring rotary air-pump for priming air in enclosed spa-ces, with a final vacuum of 0.025 atm.



20 453

### 22 151a SIGNA BEAT IVS

La efficient intr-scape condensation AT CONTROL OF THE STATE OF THE

### 22 TE2 SKIL SIP-34 E

Encional, piston, single- or double-cylinder cype: used for recount equipment or as compressors for an overpressure up on 1 arm. STROJENFORT

### 22, 053 SIGHA RIP-15 73

A water ring many air pump, used for priming gases and vapours from enclosed spaces with a final vacuum of 0.05 atm, and for producing a vacuum in various under-pressure systems in the food, chemical or metallurgical industries. Capacity: 27 cumetres per hour at a vacuum of 0.1 atm.

STROIZMORT

### SIGMA RJ 275/200/320 Horizonfal Duplex Double Cylinder Pump with Ball Valves

designed for handling clean or impure liquids, oils, emulsions etc. of a meximum viscosity of 250°B and a meximum temperature of 350°C.

STROJEXPORT

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### 22/035

### Single Cylinder Piston Steam Pump E 150/130/150

for handling oil products and other liquids of a viscosity up to 60 °E and maximum temperature of 350 °C. Maximum capacity: 60 litres per min.

STROJEXPORT

### 22/036 High-Pressure Horizontal Plunger Pump SIGMA III-38/100 CHTP

for handling chemicals and other li-quids of lower viscosity without me-chanical admixtures. Maximum tempe-rature of liquids: 90 °C. Capacity: 86 litres per min. STROJEXPORT

### 22/037 Horizontal Three-Plunger Pump MTP-III-118/120

for handling lyes up to a temperature of  $60\,^{\rm o}{\rm C}$ . Capacity: 54 to 600 litres per min. Total volumetric delivery head: 50 to 85 atm. STROJEXPORT

### 22/038 Diaphragm Pump SIGMA 25-CHM 200/50 Gum

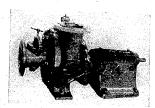
A single-acting horizontal pump with crank mechanism. Suitable for priming solutions of galvanic baths, for filtration, etc. STROJEXPORT

### 22/039 Dosing Pump of SIGMA DEP Series 40/30

A single-acting single-plunger dosing pump with crank mechanism and adjustable length of plunger lift within to to 100 p. c. with the pump at a standstill. It delivers and doses various chemicals and non-saturated solutions of salts. ed solutions of STROJEXPORT

## SIGMA NZ-5a

A small single-acting spiral casing centrifugal sludge pump suitable for handling impure liquids with solids, as well as sludge, sewage and waste water on building sites, in/sewerage systems, mines, paper mills, etc. Capacity: 100 to 2800 litres per min. Total volumetric delivery head: 16.5 metres.



### 22/041 SIGMA OZ-10

Single-stage spiral casing non-clogging centrifugal pump, designed for heavy duties. It is especially suitable for handling impure liquids with solids, sludge, sewage, refuse and waste water in the sewerage systems of large cities, industrial establishments, and also finds use in the building trade and sugar mills for conveying beet slices with water, etc. Capacity: 6,000—14,000 litres per min. Total volumetric delivery head: 28—20 metres.

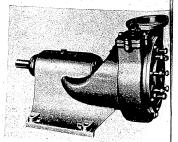
STROJEXPORT

STROJEXPORT

### SIGMA DK 100 Rotary Volumetric Pump

designed for handling viscous liquids up to a temperature of 80 °C, such as oil, tars, varnishes, fats, soap, glue, treacle, molasses, mash, fruit juices, etc. Capacity: 365 litres per min.

STROJEXPORT



### 22/043 SIGMA ZCS

A gear pump for priming liquid poly-amide, finds use with rayon spinning machines where a high dosing accu-racy is required. Capacity: 0.6 to 2.4 cu, cm per rev. STROJEXPORT cu. cm per rev.

### 22/043a SIGMA ZCV

A gear pump, designed for use with spinning machines for the production of rayon, corduroy fibres, etc. where a high dosing accuracy is required. Capacity: 0.6 to 36 cu. cm.

STROJEXPORT

### 22/044 SIGMA ZPK

A low-pressure rotary gear pump, designed for handling oils and other lubricants. It finds use with lubricatlubricants. It finds use with fubricants ing and cooling systems of machine tools, combustion engines, etc. as well as with hydraulic oil drives of various machines and equipment. Capacity: 1 to 72 litres per min. Total volumetric delivery head: 10—6 atm.

STROJEXPORT

### 22/044a SIGMA ZPG

A low pressure rotary gear pump, designed for handling thin or thick lubricants, such as oils, grease, treacle, lyes, etc. It also finds use with lubrications. cating and cooling systems of various machines, etc. Capacity: 45 to 1000 litres per min. Total volumetric delivery head; up to 6 atm. STROJEXPORT

### 22/044b SIGMA ZUN

A high-pressure precision spur-gear pump, designed for handling all kinds of oils. It finds use with lubricating systems, hydraulic oil drives, oil firing, and oil economy in general. Capacity: 5 to 1500 litres per min. Total volumetric delivery head: 40—16 atm.

STROJEXPORT



22/043

## 22/045 SIGMA VA-7/IV-DA

A single- or multi-stage centrifugal pump for delivery heads up to 450 metres. Suitable for water-works, mines and other industries up to a temperature of 80 °C of the pumped water. Capacity: up to 3000—4000 litres per min. Total volumetric delivery head: up to 160—450 metres. STROJEXPORT

### 22/046 SIGMA NO-5a

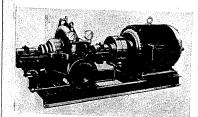
A single-stage spiral casing centrifu-A single-stage spiral casing centrifugal pump on frame, designed for handling clean and slightly impure water up to a temperature of 80 °C. Suitable for water-works, irrigation, heating plants for condensate priming and various industries. Capacity: up to 6,000 litres per min. Total volumetric delivery head: up to 18—13 metres. STROJEXPORT

### 22/047 SIGMA 125 AVBV

A vertical centrifugal pump, suitable for deep and narrow boreholes. The modern design considerably reduces the weight of the set, facilitates assembly and enables various types of drive. The pump is used for general water systems, irrigation, industrial purposes, etc. Capacity: 1300 litres per min. Total volumetric delivery head: 55 metres. Speed: 1750 r. p. m. STROJEXPORT

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### 22/048 SIGMA Q-150

22/048

A centrifugal, medium pressure, spiral, horizontally split casing with double-entry impeller. Capacity: 5000 litres per min. Total volumetric delivery capacity. head: 43 metres. STROJEXPORT

### 22/048a SIGMA Q-350

A centrifugal medium-pressure spiral and horizontally split casing-pump with double-entry impeller. Capacity: 14 000—22 000 litres per min. Total volumetric delivery head: 90—82 metres. STROJEXPORT

## NAUTILA Submersible Pump

with special water-proof electric motors of an output up to 60 H. P., for deep wells and bore holes up to 150 metres deep and 145 mm. in diameter. Suitable for pumping clean or industrial water for water-works, agricultural, industrial or household purposes. Capacity: 20 to 3,000 litres per min. Total volumetric delivery head: 15 to 155 metres.

STROJEXPORT with special water-proof electric mo-

### 22/050 SIGMA 100-HFAW

A vertical centrifugal sludge pump for dry pits. This single-stage spiral casing pump is used in repumping and sewerage stations, industry and building trade for handling sludge, sewage and waste water. Capacity: 2000 litres per min. Total volumetric delivery head: 37 metres. STROJEXPORT

### 22/051 SIGMA 100-HFBW

A vertical single-stage spiral casing centrifugal pump. Wet pits. The pump is designed for handling sludge, sewage and waste water in public sewerage system, in industry, building trade, etc. Capacity: 2000 litres per min. Total volumetric delivery head: 33 metres.

### 22/052 Model of a Filtering Station

## 22/053

### REVOLT-SUPERIOR Rainer With Spray-Line

finds use in horticulture. The oscillafinds use in horticulture. The oscillator and spray lines with spray nozzles are especially suitable for young or tender plants, flowers, early crops, etc. and are the nearest approach to rain. Dia. of spray-line: 2" up to 60 metres in length or 2½" for a length of 60 to 100 metres. Range: 7.5 + 7.5 metres. Weight: 29 kg. Length: metres. Weight: 29 kg. Length: 100 m. STROJEXPORT

### High-Pressure Rainer ZV-2000

intended for irrigation of large areas. Mobile, drawn and driven by the ZE-TOR-35 SUPER tractor. Covered area: 0.5 hectare per hour. Water sonsump-tion: 100—2000 litres per min. STROJEXPORT

## REVOLTIN Garden Sprinkler

A smal-type rotary sprinkler. Covered area: 254 to 804 sq.metres. Range: 9 to 14 metres. Weight: 8.20 kg.

ROT-REVOLT RR-1-P, RR-2-P, RR-3-P, RR-4-P long range field rotary rainers are used in horticulture and for spraying field crops with clean or river water

# Low-Pressure Irrigation Pumps

of various type. Capacity: 600 to 10,000 litres per min. Total volumetric delivery head: 6 to 20 metres.

STROJEXPORT

### 22/056 SIGMA NC-150

A single-stage centrifugal pump with frame, used for conveying cement sludge in cement factories. The removable casing cover ensures easy checking of the impeller and cleaning of the pump. Capacity: 400 to 1200 litres per min. Total volumetric delivery head: 66 to 61 metres. STROJEXPORT

## SIGMA NC-150

SIGMA NC-150

A single-stage centrifugal pump with frame, used for conveying cement sludge in cement factories. The tiltable casing cover enables easy checking of the impeller and cleaning of the pump. Capacity: 1000 to 3500 litres per min. Total volumetric delivery head: 44—43 metres.

STROJEXPORT

#### 22/058 Pumping Sets for Contractors STROJEXPORT

#### 22/059 High-Pressure Plunger Pump SIGMA R/6

SIGMA K/6 horizontal, double-pressure, six-plunger type for the delivery of clean liquids up to a temperature of 80 °C. Maxi-mum capacity: 18—95 litres per min. STROJEXPORT

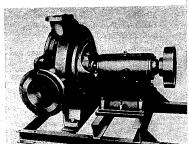
#### 22/060 Double-Pressure Radial Plunger Pump RTP 25/16/10

for hydraulic purposes, for driving presses and similar equipment where two various pressures and two sup-plied quantities are required in ope-ration the volume of which cannot be changed and depends on the speed.

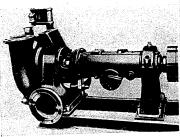
Designed for bearing oil. Capacity:
32—50 litres per min. STROJEXPORT

## High-Pressure Piston Pump of RR

designed for handling clean liquids without mechanical admixtures up to a temperature of 80 °C. The pumps are intended to operate under normal, i. e. dust-proof working conditions, free from harmful gases and vapours, sheltered from atmospheric influences. tered from atmospheric influences.



22/056



22/057

### 22/062 Hand Pump NP-225

with low stand, used for pumping clean or industrial water from wells, 7 metres deep: Maximum capacity: 40 litres per min.

### STANDARD Hand Pump

with high stand for pumping clean or industrial water from wells, up to 29 metres deep. Maximum capacity: 37 litres per min.

### **DURAL** Hand Pump

with stand for pumping clean or industrial water by hand or taking water at the outlet for its delivery to distant places. Suitable for wells up to 30 metres deep. Maximum capacity: 42 litres per min.

STROJEXPORT

Adde to the

### 22/063 LILA-75 Double-Piston Suction and Pressure Pump

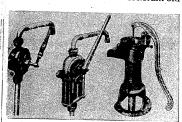
used for pumping water in houses and farms from wells up to 7 metres deep.

Maximum capacity: 40 litres per min.

STROJEXPORT

### MOSTAR-90z Single-Cylinder Double-Acting Hand Pump

used in households for drawing water dset in households for drawing water from wells, 6 metres deep, Capacity: 65 litres per min. The MOSTAR 90.Z single-cylinder double-acting hand pump is mounted on a single-wheel barrow. STROJEXPORT



## ORIENT Pitcher-Spout Pump

with low stand for pumping water from shallow wells up to 5 metres in depth. Maximum capacity: 40 litres per min. STROJEXPORT STROJEXPORT

### 22/066 Wing Pumps

To Shill Talk .

suitable for handling liquid fuels such as petrol, benzol, alcohol, crude oil, petroleum, hot or cold water, etc. Ca-pacity: 11.5—68.5 litres per min. STROJEXPORT

### 22/067 RAKETA 185 Hand Piston Pump

for handling liquid manure, waste water, sludge, etc. without heavy admixtures. Maximum capacity: 75 litres.

STROJEXPORT

### 22/048 EPOCHAL H Horizontal Centrifugal Sludge Pump

for pits 1 to 5 mm. deep and a delivery head of 6 to 8 metres. Maximum ca-pacity: 600 litres per min.

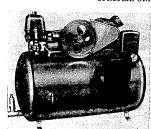
The EPOCHAL-V vertical centrifugal sludge pump finds use in agriculture for pumping industrial water and liquid manure. Maximum capacity: mum capacity: STROJEXPORT 50-250 litres.

#### 22/049 SIGVERTA 40 Portable Vertical Close-Coupled Multi-Stage Centrifugal Pump

suitable for domestic water supply and garden irrigation. Maximum suc-tion lift for handling cold water: 6.5 metres of w. column. Maximum capametres of w. column. Magain city: 60—90 litres per min. STROJEXPORT

# DARLING MIKRO Water Supply

designed for use in houses, hotels, farms, etc. Delivery head: 10 metres.
Tank capacity: 150 litres.
STROJEXPORT



### 22/071 DARLING MOSTARET

automatic water supply system with a tank of 150 litre capacity. Guaranteed daily water supply: 15 hectolitres. Maximum suction head: 6.5 metres. Maximum outlet above tank: 10 metres. \*\*TROIF\*PORT\*\* STROJEXPORT

## DARLING NAUTILA-JUBILA

automatic water supply system with a tank of 150 or 300 litre capacity, for wells and bore holes up to 25 metres in depth. Maximum daily water supply: 60 hectolitres. Minimum diameter of well (bore hole): 200 mm. Head: 10 metres.

### 22/073 DARLING MILOR

automatic water supply system with 300 litre tank and suction equipment for wells up to 25 metres deep. Maximum daily water supply: 45 hectolitres. Minimum darer of well (bore held): 1800 mm Hand: 18 metres hole): 180 mm. Head: 18 metres. STROJEXPORT

# DARLING KONTA Water Supply

supplies water to households, hotels, farms, etc. Head: 18 metres. Tank capacity: 300 litres. STROJEXPORT

### 22/075 DARLING SUPERIOR Water Supply System

Head: 18 metres. Tank capacity: 500 litres. Tank working pressure: 4 atm. STROJEXPORT

#### 22/076 Model of an Irrigation Station STROJEXPORT

### 22/077 Kerbside Pump

Reading from both sides. Automatic pump switching on and off. Instant reverting system. Maximum capacity of pump: 50 litres per min. Maximum suction lift: 6 metres of w. col.

STROJEXPORT Automatic

### 22/078 Kerbside Pump with Computor

with measuring and pumping mono-blocks. Same output as with preceding

type. Counters: reverting unit counter, computor, sum total computor and counter, volume counter in litres.

STROJEXPORT

### 22/079 Oilmix Kerbside Pump

for two-stroke engines, with computor.
Counters: petrol counter, oil computor,
sum total oilmix computor, sum total
petrol, oil and money counters.
STROJEXPORT

### 22/080 Ammonia Rotary Flow-Meter L600 Č 64

designed for use in chemical plants.
Capacity: 600 litres per min.
STROJEXPORT

### 22/081 Mobile Pumping and Measuring Group

for wine, with PD 50 litre bronze pump and L 300 bronze flow-meter. Capacity: 160 litres per min. STROJEXPORT

### 22/082 Rotary Flow-Meter L 4000

used for liquid fuels. Maximum capacity: 4000 litres per min.

STROJEXPORT



150

22/071

### 22/083 Motormeter

A rotary flow-meter for small quantities of liquid fuels, and the like. Capacity: 29 litres per hour.

STROJEXPORT



### 22/084 Mobile Oileconom Pump

for filling cans with lubricating oils at a rate of 0.5 litre per rev. Tank capacity: 120 litres. STROJEXPORT

### 22/085 Oil Piston Hand Pump

an oileconom for filling cans with lubricating oils at a rate of 0.5 litre per rev. STROJEXPORT

### 22/087 Measuring Group with L 600 Flow-Meter

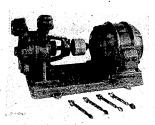
for use with liquid fuels and viscous liquids. Tank type. Maximum capacity: 600 litres per min.

### Pumping Set with Gear Pump ZUS 80

for handling viscous materials, such as varnishes, asphalt, etc. Capacity: 100 to 630 litres per min. STROJEXPORT

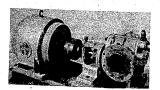
### 22/088 Pump Al 32/I-K

for pumping clean water. Capacity: 30 to 80 litres per min.



### Plunger Switch E 214

for automatic switching on or off the pump, for filling tanks with inflam-mable liquids, etc. STROJEXPORT



22/089

### 22/089 Gear Pump PZu 10

designed for pumping pure viscous liquids such as lubricating oils and grease up to 50 °E. Maximum working temperature: 80 °C. Maximum capacity: 8—11 litres per min. STROJEXPORT

### 22/090 Gear Pump PZu 250

designed for pumping pure viscous liquids, oils, etc. up to 300 °E. Maximum working temperature: 80 °C. Maximum capacity: 250 litres per min.

STROJEXPORT

### 22/091 Mobile Pumping Sets

bronze type, without meter, also with self-priming PD 40 pump. Capacity: 100 litres per min. STROJEXPORT

# MOTOKOV

Foreign Trade Corporation for Import and Export of Vehicles and Light Engineering Products

47, Třída Dukelských hrdinů, PRAHA VII, CZECHOSLOVAKIA

Telegrams: MOTOKOV Praha Teleprinter: Praha 247 Telephones: 0000, 73241-9

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Motor-cycles • bicycles • bicycle parts

Electrical and mechanical equipment for motor vehicles • chains for engines and industry

Tractors and agricultural machines

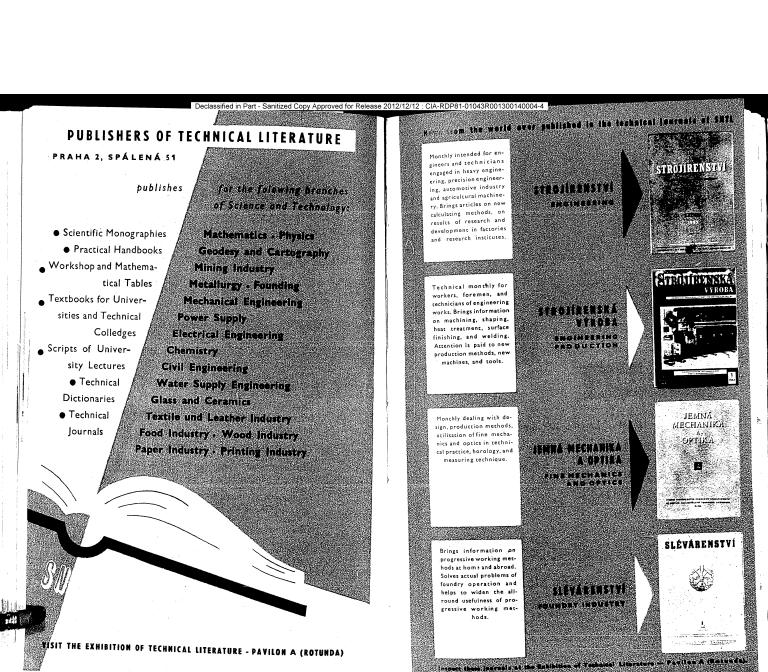
Workshop equipment • woodworking machinery • artisan's handtools

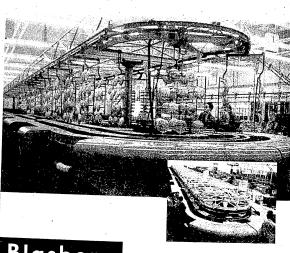
Equipment for large kitchens and household kitchens

Equipment for foodstuff shops and industry

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All galvanizing requisites



# Friedr. Blasberg G. m. b. H.

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### One-stage Self-Priming Pump PA 80

**Pump PA 80**designed for handling volatile liquids up to 4 ºE in viscosity. Maximum working temperature: 40 °C.
STROJEXPORT

### 22/095 Petrol Piston Hand Pump with

for filling cans with petrol and other inflammable materials. Maximum capacity at 35 double-strokes: 30 litresper min.

### 22/096 Metal Slit Filters

for purifying oils by removing me-

chanical impurities by means of metal plates. Maximum flow: 100 to 6500 litres per hour. STROJEXPORT

### 22/097 Adjustable Repeated Supply Equipment

A rotary L 300 flow-meter with a stop-valve. Adjustable supply range: 9 to 9999 litres. STROJEXPORT

## Diaphragm Pump, M-360 in dia.

especially designed for injecting cement milk. Also suitable for handling very impure liquids. Supplied air-pressure: 7 atm. Capacity: 0.5 1 - 1,3 1 per stroke. STROJEXPORT per stroke.

### PRODUCTS OF REFRACTORY MATERIAL

#### 23/001 Refractory Material Products

Raw magnesite, dead burned magnesite, naw magnesite, ceau burned magnesite, steelmakers grade of various granula-tion, magnesite powder, magnesite bricks, crucibles and small laboratory furnaces, chrome-magnesite bricks, magnesite-chrome bricks, silica bricks for metallurgy, silica mortar, fireclay bricks, fireclay mortar.

CZECHOSLOVAK CERAMICS

#### 23/002 Standard Electrodes and Special Fluxes

STROJEXPORT

### 23/003 Steel Cylinders

for compressed liquid gases and carbon dioxide. STROJEXPORT

### 23/004 Segment Saws

Ø 910 and Ø 1610 multi-edged cutting tool, rotating around its own axis. The segments can be easily exchanged.

KOVO

### 23/005 Side Milling Module Cutter

m  $24\times20^{\circ}$  Hobbing cutter m  $24\times20^{\circ}$ . Shank milling head Ø  $250\times$  Mk 100. Durable housing of the cutter and easy exchangeability of tools. STROJEXPORT

# Aircraft and Motor Cars

Crankshafts

### 23/007 Springs

FERROMET

FERROMET

### 23/008 Specimens of Poldi Steel Tools

High-speed steel tipped turning tools, tool holders, percussion crown drills, dies.

### 23/009 Sintered Carbides

Sintered carbide tools, diamond tipped tools, ferromagnetic material, thermistors. FERROMET, KOVO, METALIMEX



### 24 AIRCRAFT EXHIBITION

### 24/001 Z 226 Trener

All-metal, two-seat, training and fully aerobatic aircraft with installation for towing. Max. speed 200 km/h, cruising speed 175 km/h, range 560 km. OMNIPOL



24/002 Super Aero 24/002

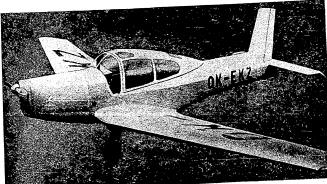
Four-seat, two engine sports, training, liaison and aero-taxi aircraft. Max. speed 270 km/h, cruising speed 240 km/h, range 1750 km.  $\begin{tabular}{c} OMNIPOL \end{tabular}$ 



24/003

### 24/003 L 60 Brigadyr

High-wing, multipurpose (touring and training tug, ambulance and agricultural) aircraft. Max. speed 191 km/h, cruising speed 180 km/h, min. speed 52 km/h. OMNIPOL



24/004

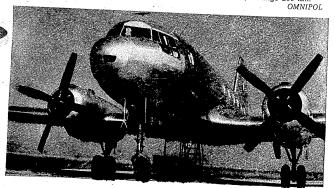
### 24/004 LD 40 Meta Sokol

All-metal touring and sports low-wing aircraft for 3—4 occupants. Max. speed  $260\ km/h,\ cruising$  speed  $220\ km/h,\ min.$  speed  $88\ km/h.$ 



24/005 Helicopter HC 2 Heli-Baby

Ultra light two-seat helicopter suitable for training helicopter pilots and for fast transport. Max. speed 130 km/h, cruising speed 100 km/h, range 180 km/h



24/006

Transport Aircraft AVIA-14-22

Two engine short and medium range all metal aircraft for 22 passengers, 5 crew members and freight suitable for operations from small grass aerodromes. Max. speed at 2000 m 416 km/h, cruising speed at 2000 m 320 km/h, min. speed 110 km/h, range at cruising speed 2000 km.  $\ensuremath{\textit{OMNIPOL}}$ 



24/007

24/007

Five seat, two engine sports, training, liaison and aerotaxi aircraft. The most up-to-date Czechoslovak transport aircraft. Max. speed 300 km/h, cruising speed OMNIPOL 275 km/h, range 1600 km.

### 24/008 Herkules III

Self-propelled, two-drum winch for launching sailplanes with diesel engine. Tatra 108. Engine output 134 HP. OMNIPOL

### Electrically driven artificial horizon LUN 1201

for all sorts of aircraft with unlimited freedom of movement about both functional axes. Weight 1200 g. OMNIPOL

### Horizon LUN 1202

a gyroscopic flight instrument indicating aircraft's altitude relative to the horizontal plane during blind flying.

OMNIPOL

#### 24/011 Horizon LUN 1207

in principle the same as horizon LUN 1202, but this one is fed directly from a D. C. battery without the use of a convertor.

OMNIPOL

# 24/012 Airspeed indicator to $200/400\ km/h$

LUN 1101 an airspeed indicating instrument for slow aircraft. Weight 250 g. OMNIPOL



24/008

24/013 Airspeed indicator to 400/800 km/h LUN 1103

for all types of aircraft except the very slow and high-speed aircraft. Weight 250 g. OMNIPOL

### 24/014 "Flot plate" rate of climb indicator to 5 m/sec LUN 1141

a sensitive instrument used for keeping the aircraft flying in a horizontal plane and for the indication of low rates of climb. Weight 480 g. OMNIPOL

24/006

### 24/015 Rate of climb indicator to 15 m/sec LUN 1145

for various types of aircraft whose rates of climb are designed not to exceed 15 m/sec. Weight 280 g. OMNIPOL

# Rate of climb indicator to 30 m/sec LUN 1146

for aerobatic sailplanes and fast powered aircraft; has the same advantages as the 15 m/sec rate of climb indicates.

### 24/017 Altimeter to 10 000 m LUN 1121

for sailplanes, helikopters and powered aircraft of all types which do not fly higher than 10 000 m. Weight 650 g OMNIPOL

### 24/018-019 Pilot head LUN 1151 and LUN 1152

a pick-up of static and dynamic prea pick-up of static and gynamic pre-sure connected to aircraft altimeters and rate of climb indicators. Can be installed in any type of aircraft and functions satisfactorily at all speeds. OMNIPOL

#### 24/020 Test laboratory for testing aircraft instruments

a combined set-up of various test fa-cilities for testing horizon's pressure gauges, horizon's converters breathing apparatus, fire detectors-warnings, airspeed indicators, machmeters, alti-meters, cabin altimeters, compres-sor pressure gauges, rate of climb indi-cators and other aircraft diaphragm-type instruments, facilities for vibra-tion tests are also provided. OMNIPOL

### Portable test equipment diaphragm-type instruments PM

installed in a small coffer  $460 \times 320 \times$ installed in a small coller 460 × 520 × 225 mm, this equipment serves for testing altimeters, machineters, rate of climb indicators and airspeed indicators. Weight 20 kg.

OMNIPOL

### 24/022 Portable equipment for testing the breathing apparatus PD

enables checking some parameters of enances checking some parameters of aircraft oxygen apparatus, breathing masks, hose leakages, overpressure and low pressure. It is installed in a bag 460×320×160 mm. Weight 15 kg.

OMNIPOL

### 24/023 G-meter

The instrument can be used for simple measurements of variable accelerations; it may also be used for measuring accelerations acting in one sense only. The advantage of this instrument is the instantaneous reading of the recorder acceleration value. acceleration value. OMNIPOL

Glow-plug engine Vltavan 2.5 and 5 ccm OMNIPOL

### 24/025

Pocket altimeter

OMNIPOL

24/026 Relays

OMNIPOL

### 24/027

LUN 1222

Thermostat T3m, T31, T32

### OMNIPOL 24/028 Direct reading pilot compass

is manufactured for northern as well as southern hemispheres according to customers' request. Weight 400 g.

OMNIPOL

### Electrically driven turn and bank indicator LUN 1213

Gives instantaneous indication of angular speed and of corresponding bank angle when an aircraft executes a level turn.

OMNIPOL OMNIPOL

### 24/030 Speed indicator

is designed according to the small-size standard of aircraft instruments, 60 in dia, and consists of the indicating system and a synchronous motor.

OMNIPOL

### Transmitter of the distant-reading speed indicator

is an A. C. generator, where the current frequency is equal to the number of revolutions of the crankshaft.

OMNIPOL

24/032 Direct-function speed indicator LUN 1301

retains the same accuracy of indication as the distant-reading instruments. It works on the magnetic tachometer principle and has a temperature compensating device.

OMNIPOL



24/033

### 24/033 ELOX-METER

An instrument enabling a quick check of the anodised layer thickness in series production. It is used on alluminium and its alloys.

MOTOKOV nium and its alloys.

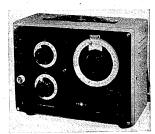
### 24/034 Portable stroboscope RS-55

It has two frequency ranges: 200 to  $3000\,\mathrm{r}$ , p. m. and 1000 to  $15\,000\,\mathrm{r}$ , p. m. The shown accuracy between the temperature limits  $-30\,^{\circ}\mathrm{C}$  to  $+40\,^{\circ}\mathrm{C}$ . Weight  $850\,\mathrm{g}$ .

### 24/035 Compensating switch-box for strain-gauge measurements type PS-1

Enables quick and accurate measurements with various strain-gauges stuck on to the tested detail. One compensating strain-gauge may be used for more points. Weight approx. 5 kg.

OMNIPOL



24/036 Strain-gauge unit SA-1

used for routine strain-gauge measure-ments. Weight with batteries 12 kg. OMNIPOL

Oil and fuel pressure triple indicator - LUN 1521 OMNIPOL

24/038 Fuel pressure transmitter (to 0,5 kg/cm<sup>2</sup>) - LUN 1551

### 24/039 Oil pressure transmitter (to 10 kg/cm<sup>2</sup>) - LUN 1561

A set of instruments for remote reading of fuel pressure; oil pressure and oil temperature. The whole set as well as individual instruments can be used after a slight modification for measuring the service parameters of internal combustion engines.

OMNIPOL

24/040 Electrical flap position indicator -OMNIPOL LUN 1682

158

24/036

### 24/041 Flap position indicator transmitter - LUN 1683

The set is manufactured as an independent unit workfing on D. C. On customer's request may be modified to work in other ranges of angles.

OMNIPOL

### Undercarriage position indicator LUN 1692

with signal warnings for 2 limiting positions of the undercarriage. To ensure safe operation it has a button en-abling a check of bulbs circuit and a damping resistance switch for decreasing the intensity of the illumination.

OMNIPOL

#### 24/043 Fuel content transmitter -LUN 1613

A float type fuel content transmitter and fuel content indicator; can be modified for various production tests requiring measurements of liquid contents in tanks on small aircraft. OMNIPOL

24/044 Shunt for VA meter to 30 A or to 60 A

OMNIPOL

### 24/045 Capacity decade XCI

thin i was

for routine laboratory tests. OMNIPOL

### 24/046 Resistance decade XRI

is with its range, accuracy and permissible loads most suitable for technical measurements and research work in wireless field.

OMNIPOL

### 24/047 Portable magnetometer Mk 5

### OMNIPOL

### 24/048 Laboratory magnetometer Mk 6

With this instrument can be measured all parameters which can be converted to magnetic field measurements. It can be modified for special tasks according to customers' request.

OMNIPOL

### 24/049

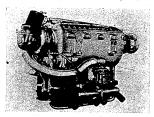
### Electric thermometer ThT

for measuring the temperature of liquids in vessels or ducts (pipes), temperatures of various machine parts when running, and for a whole range of other tests.

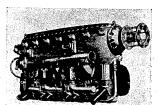
## 24/050 Microchmmeter MOds

for measuring very resistance values, especially transitory resistance. A modified voltammeter method is here used. The instrument has four test ranges, the basic archives 700 microstymest. the basic one being 300 microohms.

OMNIPOL



24/052 24/052 Engine Walter Minor 4-III OMNIPOL



24/053 24/053 Engine Walter Minor 6-III

OMNIPOL 24/055 Engine AS 28T for AVIA 14 aircraft, with propeller OMNIPOL 24/056 Propellers 401 E, 401 EK, 411

OMNIPOL

#### **ELECTRICAL COMMUNICATION** 25 ENGINEERING

### 25/001 Radio Transmitters TESLA

remote-operated and remote-control-led transmitter service. The manufac-turing programme comprises also nume-rous smaller short-wave transmitters as well as transmitters for heavy service conditions on ships, air-ports and railways. Television transmitters of small and medium capacities are intended particularly as local sources of television programs.

KOVO

#### 25/101 Portable Communication Receivers and Transmitters

serve for mutual communication. Transmitter and receiver form a single unit providing for easy transport. KOVO

### 25/111 Industrial TV

presents a new item of the exhibition. Its wide range of industrial applica-tions facilitates rationalization of pro-duction.



25/131

### 25/131 Telephone Apparatus TESLA T 57

for public or branch telephone plants with an automatic telephone exchange. A pushbutton enables back calls or to pass the call to some other branch station. The acoustic back coupling is damped by a special connection. KOVO

### 25/141 Automatic Telephone Branch

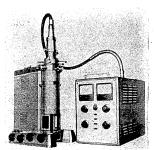
Exchange TESLA UTU suitable for 40 to any number of calling stations with any number of public or various fully-automatic or semi-automatic trunk lines.

### Profile Regulator TESLA 510813

with a constant impedance of 200 ohms and a regulating range of 60 db. Flat regulating path.

### 25/171 Small Receiving Set TESLA 517831

Case-type amplifier for quality radio reception with three individual symmetric receiving-circuits of 50-60 ohms which can easily be adjusted to 200-800 ohms. Total amplification 92 db.



### 25/201 Desk-type Electronic Microscope BS 242

for the examination of various organic and anorganic specimens for the for the examination of various organic and anorganic specimens for the purpose of studying their structure, etc. Observations directly on the screen of the microscope or on the photographs. Maximum enlargement 1: 30,000.

KOVO

#### 25/211 Decadic Counter BM 353

for the numerical qualification of impulses originating from radiation detectors. It serves for determining the intensity of radiation and is adjusted for use with GM-tubes. KOVO

### 25/221 H. F. Generator 12 XJ 009

is the source of an a. c. voltage of small distortion. It operates on the beat-frequency principle. KOVO



25/231

### 25/231 Level Meter 12 XN 012

for measuring small voltage levels, passive and active fourpoles, taking their frequency curves and serving as zero indicator in bridge measurements.

### 25/241 Measuring Set 3 cm

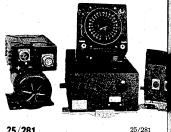
for measuring the conditions on wave-carriers of 3 cm equipments.  $\ensuremath{\mathit{KOVO}}$ 

### 25/261 VKV Railway Despatch Equipment

intended to control the shunting of locomotives in shunting stations (range 10—15 km.). By means of relaying stations this equipment enables the communication between the train dispatcher and the moving locomotives within his district.

### 25/271 Automatic Antenna-Change-Over Switch APA

changes automatically two antennae on the entry of the receiver. KOVO



#### 25/281 Aircraft Deck Radio Station VVF 25 K

for communication between the airoplane and the ground station in the  $118{-}128$  mc band.

#### 25/282 Automatic Aerial Ground Goniometer VKV

serves to locate aircrafts in the 118 to 132 mc band from the ground station.

### 25/291 Directional Communication DT 11

long-distance transmission of television picture signals over a distance of up to 500 km.

KOVO

### 25/292 Automatic Deck Radio-Compass

for the automatic location of radio beacons and radio stations on medium and long waves. KOVO

### 25/293 Mobile Television Relay MR 12

for the transmission of television picture signals from the reporter car or studio into the TV-transmitter. KOVO

#### 25/301 TV-Transmitter TESLA TV 0.6/FM 0.6

will be exhibited in operation. KOVO

#### 25/302 Short-wave Universal Transmitter TESLA KUV 3/5

for telegraph service (A1 and F1) is adjusted for radio distance typing. Exit output 5 kW. KOVO



25/311

#### 25/311 VKV Communication Receiver K 13 A

for reception AM (A1, A2, A3) and FM (F3) in the 24—184 mc band with a high frequency-stability.

### **25/312** Keying Unit 3 K 5

suitable for the connection of various recording instruments (Teletypewriter, etc.) to all standard communication receivers.

### 25/321 Radio Components

of normal and miniature sizes. KOVO

### 25/322 Electrolytic Condensers

with screw fixture, suitable for mounting in any position.

### 25/323 Ceramic Condensers

of all shapes and materials for the thermal compensation of oscillating and power circuits. KOVO

### 25/324 Balancing Condensers

with small h. f. losses, air dielectric, easy linear adjustment of the capacity by turning the condenser over more than three times 360°. KOVO

### 25/325 Potentiometers

layer type, for current applications in radio and amplifying techniques.

#### 25/331 Equipment for h. f. Telemetering TESLA VDM 12

suitable to transmit measurements over extreme-high-voltage lines. KOVO

### 25/352 Equipment for Remote Signalisation and Remote-Control TESLA DSO 1

suitable for application in power-despatch rooms and for remote-control of switching stations and hydro-electric power stations.

### 25/333 Single-channel h. f. Telephone for Power Stations TESLA JVT 2

for duplex telephone communication by means of h. f. waves along extremehigh-voltage lines (110 kV, 220 kV). KOVO

#### LABORATORY INSTRUMENTS 26

### 26/001

Photo-electric Colorimeter with Two Photo-electric Cells

Balanced connection for zero setting, fitted with built-in voltage stabilizer.

### 26/002

MINOR Photo-electric Colorimeter with One Photo-electric Cell

Fitted with built-in voltage stabilizer and disc for insertion of five colour filters. The value of the solvent is automatically checked.



26/003

### 26/003 Photo electric Colorimeter with One Photo-electric Cell

An universal instrument fitted with voltage stabilizer and galvanometer for circular and rectangular cells. KOVO

### 26/004 MULTOSCOPE III pH Meter

An electronic pH meter directly calibrated in pH units as well as in millivolts. Ranges: 0-8 pH or 0-800 mV. 6-14 pH or 600-1400 mV. Accuracy: 0.1 pH or 10 mV. KOVO

## MULTOBAT II pH Meter

A portable dial pH meter designed for battery operation. Range. 0—14 pH.
KOVO

## MULTOBAT III pH Meter

A portable, battery-operated pH meter with built-in power supply. Fitted with temperature compensator, two ranges from measurement of pH units and millivolts. Ranges: 0-8 pH or 0-800 mV, 6-14 pH or 600-1400 mV.

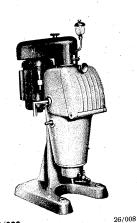
Kovo



### 26/007 Centrifuge for 36 Butyrometers

Designed for operation on 220 V A.C. power supply mains. Used for centrifuging milk samples in butyrometers to determine the fat content of milk.





26/008 SHARPLESS Centrifuge

A universal, continuous flow-type centrifuge fitted with cooling or tempering worm. ing worm.

### 26/009

Penning's Vacuum Gauge

A high-voltage discharge type gauge. Range: 0.2—10-6 mm Hg. KOVO

#### 26/010 Flowmeter with Induction Transfer

Intended for indirect measurement. The induction transmitting device ensures remote measurement and re-

#### 26/011 Engler's Viscosimeter

Fitted with temperature control selector of the viscosimeter heating jacket.
Automatic stirring of the tempering hath

#### 26/012 CONDUCTOSCOPE II

An instrument for measurement of conductance of solutions and conductinetric titration. Designed for operation on 220 V, 50 c/s, A. C. mains. Range: 1 ohm - 20 Megohms.

## MULTOGRAPH

A controlling and recording instrument for measurement of pH even during very difficult working conditions. The instrument is protected against aggressive gases and vapours.

### 26/014 Electromagnetic Titration Stirrer

The stirrer does not impede the insertion of electrodes, the thermometer and the inlet of titration substances. The instrument permits stirring of solutions in closed and evacuated vessels. Range of r. p. m.: 60—600. Power supply: 220 V, 50 c/s A. C. KOVO

### 26/015 Oil Oxidation Number

Fitted with an intedendent heating device of the reheating tank for keeping temperature constant at 140  $^{\circ}$ C. A series of water manometres are provided for keeping the oxygen flow constant.

### 26/016 Portable Smoke Recorder

And instrument for evaluation of exhaust gases of Diesel engines by the amount of suspended burnt particles of oil inside the exhaust tube on a filter paper. Designed for operation on 220 V mains.



#### 26/017 Thermostat

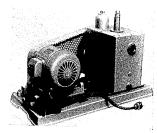
Designed for keeping the temperature of the interior space constant at a temperature set at a required degree within the range of approx.  $+30^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$ .

#### 26/018 Oil Diffusion Pump

Pumping speed: 10, 30, 150, 250 and 500 litres per sec. Attainable high vacuum:  $10^{-6}$  mm Hg, with freezing  $10^{-7}$  mm Hg.

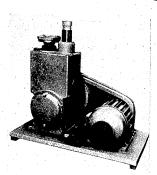
### 26/019 Rotary Oil Vacuum Pump, No. 1

Pumping speed: 3, 15, 30, 120 m³ per hour. Attainable high vacuum: 10-2 mm Hg. Type RV3 is air cooled, types RV 15, 30, 120 are water cooled. KOVO



# 26/020 Rotary Oil Vacuum Pump, $7 \text{ m}^3/\text{h}$ , No. 2

Attainable high vacuum: 10-3 mm. KOVO



### 26/021 Pumping Unit

A combination of rotary oil vacuum pumps, pumping speed 7 m³ per hour, and of the paraffin diffusion pump, pumping speed 10 litres per sec. A cock and a checking discharge lamp are provided for determining the degree of attained fore-vacuum.

### 26/022 Metal Coating Unit

Designed for metal coating of various materials with different metals in the vacuum.

### 26/023 LP 55 Polarograph

A photographic recording polarograph for very accurate analytical examinations and analyses of materials according to the Heyrovsky's classical method.

### MICROSKOPY

#### 26/026 MEOPTA S 30 Stereoscopic Microscope

Intended for observation and examination in different medical branches, e.g., gynaecology, colposcopy, ophthalmology, ear, throat and other medical sciences.

### 26/027 Petrological Microscope

Intended for extensive work in natural as well as polarised light. Magnification:  $12 \times$  to  $1,500 \times$ . KOVO

### 26/028 MEOPTA A 26 V Microscope, Type 561 09

Fitted with adjustable eyepiece tube and square mechanical stage for complicated laboratory and diagnostic works. Total magnification: 36% to 1,500%.

#### 26/029 MEOPTA A 36 Bi Microscope, Type 561 12

Fitted with binocular head, coefficient 1.5× and square mechanical stage for extensive research and development work. Total magnification: 54x-2,250x.

### 26/031 MEOPTA A 11 P Microscope, Type 561 01

Fitted with fixed eyepiece tube and circular fixed stage for basic biological studies. Total magnification: 24× to KOVO

### 26/032 MEOPTA A 23 P Microscope

Designed for complicated laboratory and diagnostic work. Magnification:  $36 \times$  to  $1,500 \times$ .

### 26/033 MEOPTA B 26 S Microscope

Designed for complicated laboraty and diagnostic work. Magnification: 36× to 1,500×.



26/026

#### 26/034 MEOPTA A 23 Bi Microscope, Type 561 13

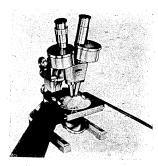
Fitted with binocular head, coefficient  $1.5\times$  and circular centering stage, intended for complicated laboratory and diagnostic work. Total magnification:  $54\times$  to  $2.2500\times$ . KOVO

# **26/035 MEOPTA A 12 P** Microscope, **Type** 561 02

Fitted with fixed eyepiece tube and square fixed stage, intended for biological studies. Total magnification: 24x-450x. KOVO

#### 26/036 MEOPTA B 23 S Microscope, Type 562 06

Fitted with inclined eyepiece tube and circular centring stage for complicated laboratory and diagnostic work. Total magnification:  $36\times$  to  $1,500\times$ . KOVO



### 26/037 MEOPTA G 11 P Stereoscopic Microscope, Type 563 01

This microscope, fitted with tiltable stand, ensures direct view of stereoscopic observation in passing and incident light. Total magnification:  $10.8 \times$  to  $100 \times$ .

### 26/039 MEOPTA C 36 Bi Microscope Type 562 43

The foot of the stand is fitted with a small illuminator. The microscope is provided with binocular head, coefficient  $1.2\times$  and square mechanical stage. Total magnification:  $43\times$  to  $1,800\times$ . KOVO

### 26/040 MEOPTA PA Polarizing Microscope, Type 565 03

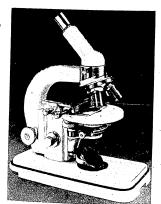
Intended for extensive examination 

### MEOPTA BC 28 SV Travelling Microscope, Type 562 21

A portable microscope with inclined adjustable eyepiece tube, circular fixed stage and mechanical slide carrier. Total magnification:  $36\times$  to  $2,000\times$ . KOVO



26/039



### MEOPTA Phase Contrast Device, Type 579 03

A supplementary device of accurate microscopes designed for the new microscopic observation technique. KOVO

### MEOPTA Bürker's Haemocytometer Chamber

Fitted with Bürker's ruling, intended for counting of red and white corpuscles and blood platelets. KOVO



### MEOPTA "N" Microscope Lamp

Used for illumination during microscopic observation in passing light. The lamp is fitted with a low-voltage bulb but with high light output. Can be connected to the power supply mains via a transformer. KOVO former.

### 26/045 MEOPTA Paraboloid Condenser

Used for microscopic observation in the so-called dark field, when even the most minute particles and micro-organisms give very contrasting images. KOVO

### MEOPTA "P" Petrological Mechanical Slide Carrier

A supplementary device of the polarizing microscope, type PA 565 03, used

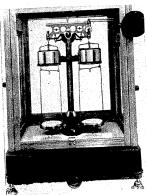
for continuous setting of the petrological specimens.

### 26/047 MEOPTA SMA Semi-Micro-Analytical Balance, Type 163 01

Designed for very accurate weighing in laboratories. Maximum capacity: 100 g, sensitivity: 0.01 mg. KOVO

### 26/048 MEOPTA A 3 Analytical Balance, Type 165 01

Designed for very accurate weighing in laboratories. Maximum capacity: 200 g, sensitivity: 0.1 mg. KOVO



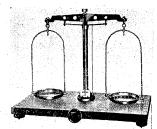
26/049

### 26/049 MEOPTA A 1 Analytical Balance, Type 163 02

Designed for very accurate and rapid weighing in laboratories. Maximum capacity: 200 g, sensitivity: 0.1 mg. KOVO

### MEOPTA T 1/100, 200, 500 Technical Balance, Type 154 01-03

Designed for accurate weighing in works laboratories and research institutes.



### MEOPTA T 2/1000, 2000, 5000, 10,000 Technical Balance, Type 154 04-07

Intended for accurate weighing in works laboratories, research institutes,

# MEOPTA T 3 Technical Balance, Type 158 31

Designed for determination of water content in butter. Maximum capacity: 100 g, sensitivity: 2 mg. KOVO

### MEOPTA K1 Torsion Balance, Type 152 01-13

Designed for determination of very minute quantities of various materials. Weighing range (according to the type of balance: 1 mg-10 g, sensitivity: 0.002-20 mg. KOVO

### METRA Wedge-type Polarimeter, Type 62011

Also called saccharimeter, used in sugar refineries for concentration determination of sugar solutions.

### METRA Circular-type Polarimeter, Type 62010

Used to determine concentration of optically active substances in sugar industry, medicine, chemistry, fodstuff and cosmetic industries.

### METRA "Simplex" Polarimeter, Type 62004

Used for examination of different solutions in medicine. KOVO

### METRA Stammer's Colorimeter, Type 62500

An optical instrument for checking the density of sugar juices and solutions in sugar refineries. KOVO

### 26/056 METRA White Light Lamp

An accessory of the wedge-type polari-meter-saccharimeter, fitted with a stan-dard electric incandescent lamp.

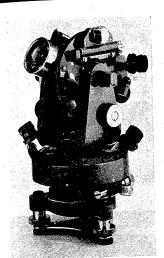
### 26/057 METRA Sodium Light, Type 62013

Supplied as an accessory of the polarimeter, ensures yellow chromatic light.



### 26/058 MEOPTA TH Theodolite 30×, Type 605 04

A universal goniometric repetition in-strument fitted with a detachable tripod and metal circles, intended for lower-order triangulation.



26/059

### 26/059 MEOPTA THO Theodolite $30\times$ , Type 605 07

Type 605 07

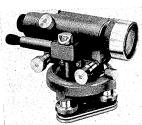
A universal goniometric repetition instrument, fitted with a detachable tripod and metal circles, intended for lowerorder triangulation, suited for underground surveying work. Electrical illumination is provided for work at night.

### 26/060 MEOPTA T1X, Theodolite, **Type 605 05**

A universal repetition instrument, fitted with detachable tripod and glass circles, intended for lower-order triangulation. Electrical illumination is provided for work at night.

#### 26/061 MEOPTA Pilot Balloon Theodolite Type 605 10a

Used for tracking pilot balloons; gives the direction and strength of the wind at different heights.



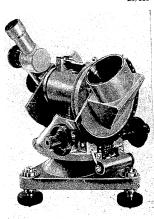
26/062

### 26/062 MEOPTA NK Surveyor's Level 30×, Type 603 04

Intended for levelling work, surveying of level ground, for measuring deformations, etc. KOVO

### 26/063 MEOPTA Universal Optical Square, **Type 601 06**

Used to mark out lines perpendicular to lines, plotting of lines, location plans and for rough determination of contourlines KOVO



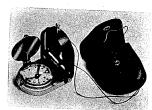


### Universal Anemograph 957

an instrument for indication and recording wind direction, as well as mo-mentary and average wind speed. KOVO

### 26/069 Radio Meteorological Set 971

in connection with meteorological in-struments for determination of baro-metric conditions in high atmosphere. A set of instruments for meteorological stations



### 26/064 MEOPTA BEZARD Compass, Type 114 01

An instrument for indicating the four cardinal points, for orientation in the field, for determining the marching direction, for orienting maps, etc.

### KOVO MEOPTA Geological Compass, Type 114 02

Used for geological-magnetic investigation works. KOVO KOVO

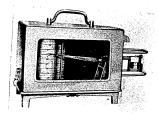
### 26/066 MEOPTA NK Surveyor's Level 10 imes, Type 603~05

Used for rough levelling work when surveying building plots, railway dams, etc.

### 26/067

### Refractometers

are used for determination of index of refraction of examined liquid. KOVO



### 26/070

### Thermograph 871

Serves for recording ambient air tempeKOVO

26/070

### Hygrograph HG 882

Serves for recording of relative air humidity.

### Barograph BG 197

Serves for recording of barometrical pressure expressed in 1 mm Hg equals 1 mm on recording chart. KOVO

### Microbarograph MIBG 183

Serves for recording changes of barometric pressure expressed in 1 mm Hg equals 2 mm on recording chart.

## THHG 851 Thermo-Hygrograph

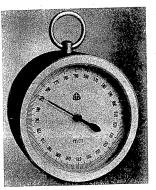
Designed for recording air temperature in the room and simultaneously the relative humidity of the air. KOVO

### HEL 875 Heliograph

Used for recording the time and duration of sunshine.

### PM 885 Psychrometer

Used for accurate determination of the relative humidity of the air. KOVO relative humidity of the air.



### AN 835 Aneroid, Small Type

An instrument for measurement of atmospheric pressure. Range of dial: 560-790 mm Hg. Accuracy of measurement: 0.2 rm Hg on 10 mm Hg. Temperature compensation:  $-30^{\circ}$  to  $+50^{\circ}\text{C}$ .

### ANV 836 Aneroid, Large Type

Used for measurement of barometric pressure. The instrument is suspended on steel springs in a portable case. Range of dial: 500 mm Hg - 800 mm Hg. Accuracy of measurement: 0.1 mm Hg on 10 mm Hg. Temperature compensation: —35° to +50°C. KOVO

### RSM 827 Recording Vane

Used for indication of the wind direction. Range: 4 main and 4 secondary directions, 1 revolution of the recording drum: 12 hours, 7-day clock-

### AR 950 Hand Anemometer

Used for measurement of momentary wind velocity. Range: 0-25 m/sec.

### ARH 953 Three-Pointer

### Anemometer

Used for wind measurement within a certain period. KOVO

#### HM 883 Hygrometer with Thermometer

Used for measurement of relative air
KOVO

### HMK 884 Chamber Hygrometer

Used for measurement of relative air humidity in incubators.

### 890 Ombrograph

Used for automatic recording of rainfalls. 1 mm of rainfall = 5 mm plotting on the recording chart. The recording drum revolves once in 26 hours. KOVO

### 26/071 METRA Limnigraph - Remote Transmitter, Type 66525

Used for checking variations of water level. When water level is changed, electric impulses are sent out to the remote receiver.

#### 26/072 METRA Recording Limnigraph -Receiver, Type 66542

Used for recording the water level. It receives electric impulses of the remote transmitting limnigraph, type 66525.

### KOVOEXPORT,

Czechoslovak Export Magazine of the Czechoslovak Light and Precision Engineering Industry.

## 27 ELECTRONIC MEASURING INSTRUMENTS

### 27/001 Work-shop Oscillator Tesla BM 205

designed for balancing h.f. circuits and for controlling the selectivity and sensitivity of receivers. Frequency range 94 kc to 30 mc divided into 5 subranges.

#### 27/002 A. C. Stabiliser Tesla BM 206

operates with magnetically saturated iron and is assembled from elements, which are partly in resonance. Maximum load 300 W. Output for loads of 100, 200 and 300 W.

### 27/003 L. F. Millivoltmeter TESLA BM 210

for measuring small voltages in the frequency range of 20~c/s to 30~c. The measuring range of 0.003 to 300~V is divided into 10~ subranges. Accuracy  $\pm~3~$  per cent within the range of 30~c/s KOVO

### 27/005 Feeding Source Tesla BS 275

with the following voltages brought out for heating electron tubes:  $2\times6$  3/2A, 12.6 V/1A, 4 V/3A. Anode voltage within the range of 0 to 700 V at abt. 100 mA consumption.

### 27/006 Teraohmmeter Tesla BM 283

for measuring large resistances and isolation resistances within the range of  $10^{9}$  to  $10^{13}$  Ohms. The accuracy of measurements is abt. 10 per cent.

### 27/007 Short-circuit Meter Tesla BM 285

for the detection of short-circuit between the turns of transformer coils, amplifier coils, h. f. coils, etc. Measuring frequency abt. 900 c/s. KOVO

### 27/008 Voltohmmeter Tesla 289

for the measurement of D. C. and A. C. voltages and resistances. It measures

D. C. voltages up to 6 kV, and A. C. voltages up to 300 V (20 c/s, to 50 mc). Errors of indication: D. C. voltages 3 per cent, A. C. voltages 5 per cent. Range of the ohrmmeter 0 to 200 megohms, error of indication = 5 per cent.

### 27/009 RLC Bridge Tesla TM 393

for measuring resistances, capacitances and inductances. Ranges: Resistances 0.01 to 10 megohms inductances  $10\,\mu H$  to  $100\,\mu H$ , capacitances  $1\,p F$  to  $100\,\mu F$ . The accuracy for R and C is  $\pm 2$  per cent, for L  $\pm 3$  per cent. KOVO

#### 27/010 Absorption Wavemeter Tesla BM 307

for quick measurements of the frequency range 100 kc to 50 mc. Accuracy ± 2 per cent.

#### 27/011 Electronic Changer Tesla TM 557

for the observation of two simultaneous phenomena on an oscillogram. The change-over frequency can be adjusted gradually within the range of 30 c/s to 50 kc. The frequency range of amplifiers is 30 c/s to 150 kc. KOVO

### 27/012 Oscillogram Tesla TM 694

for the observation of instantaneous periodic electrical phenomena. Frequency range 20 c/s to 500 kc. Incoming impedance 50 kiloohms, or when using the divider 1:10, 0.45 megohms/4 pF. Maximum D. C. component 250 V.

### 27/013 Tesla BM 208 D. C. Source

Source of D. C. voltage suitable to be regulated within the range of 0 to 250 V at 300 mA load, or 0 to 500 V at 240 mA load. The panel accommodates also the voltages for heating standard electron tubes and the A. C. voltage regulated within the range of 0-250 V.

#### 27/014 Q-Meter up to 30 Mc/s Tesla BM 211

measures the electrical quality of coils, may also be used to measure inductances and capacitances and to ascertain the losses of condensers and dielectric materials. Measuring range of Q from 0 to 450 in two ranges. Accuracy of the measurement ± 5 per cent. Capacitances can be measured from 0.1 pF to 450 pF directly with an accuracy of ± 3 per cent.

#### 27/015 Q-Meter 30 to 200 Mc/s Tesla BM 220

Laboratory measuring instrument intended to measure the electrical quantity of coil and condensers within the frequency range of 30 to 200 mc.

### 27/016 AM Generator Tesla BM 223

Laboratoryh.f. measuring generator for various measurement on h. f. circuits. It operates within the frequency range

of 30 kc to 30 Mc/s and is particularly suitable for laboratory on radio receivers, etc.

KOVO

### 27/017 Video-Generator Tesla BM 286

for measuring and trimming wide-band amplifiers. Frequency range 10 c/s to 10 Mc/s. Distortion 5 per cent at 5 V incoming voltage. KOVO

### 27/018 Frequency Substandard Tesla BM 287

This is a high-precision source of the high frequency of 100 kc/s and six derived frequencies obtained by subdivision for the purpose of comparing frequencies at from 10 c/s to 1.5 Mc/s.

### 27/019

### Distortion Meter Tesla BM 224

for direct measurements of the percentage distortion of amplifiers, receivers, generators etc. Readings within the range of 0.1 to 100 per cent in five subranges.

## 28 DIAL MEASURING INSTRUMENTS









28/005

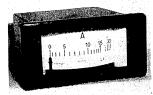
### 28/001-003 DHR 3, DHR 5, DHR 8 Small Switchboard Instruments

Designed for flush mounting; intended for measuring D. C. currents and voltages (, A).

#### 28/004 EH; 5

#### EHi 5 Switchboard Instruments

Designed for flush mounting, square pattern, intended for measuring A. C. currents and voltages (V, A). KOVO













Switchboard Instruments

The same as above but edgewise pattern (V, A) KOVO

28/006 GIIHi 5

Wattmeter Switchboard

Instrument

Designed for flush mounting, square pattern, for measuring A. C. power.

KOVO

Power-Factor Meter

The same as the former. Serves for measuring power factor in A. C. single and three-phase systems with lagging and leading loads.

28/008

Bie i first

Frequency Meter

Used for measurement of power frequencies in A. C systems (resonance system).

28/009-014

Ship Instruments

SMIP INSERGIMENTS

Built in sturdy casings, designed to operate under especially heavy duty conditions. Flush-mounted, square pattern

EHR 16/L Voltmeters and Ammeters

For measurement of A. C. currents and

KKHR 16/L Double Frequency Meters

Used for measuring technical frequency in two independent A. C. systems.

GIIHR 16/L Wattmeters

Used for measuring A. C. power.

CHR 16/L Power Factor Meters Used for measuring power factor in theree-phase A. C. systems

SyHR 16/L Synchroscopes

Serves for checking revolutions of electric apparatuses with parallelling switching.

oDsHR 16/Le Revolution Connters Used for remote speed indication.

Pointer deflection 240°. KOVO

28/015 Laboratory Instrument

Laboratory voltmeters and ammeters for measurement of A. C. voltages and currents. Degree of accuracy: 0.5%.

28/016 Laboratory Instrument DLi

Laboratory voltmeters and ammeters for measurement of D. C. voltages and currents. Degree of accuracy: 0.5%. KOVO

28/017 Laboratory Instrument

Used for radio-frequency measurement of voltages and currents. Degree of accuracy: 1.5%.

28/018 SLi Current transformer

Used for increasing the basic current ranges of PLi or GLi wattmeters. KOVO







28/019 Electrodynamic Wattmeter

Laboratory type designed for measurement of A. C. and D. C. power (portable). Degree of accuracy: 0.5% KOVO

28/020 Ferrodynamic Wattmeter

Portable, designed for measurement of A. C. power. Degree of accuracy: 0.5%.

KOVO

28/021 Series Resistor RLiG

Used to increase the voltage range of the GLi ferrodynamic wattmeter, 60 to 600 V (portable). KOVO

28/022 Synchronizing Bracket RSyO

Used for parallel test switching of alternators. KOVO

28/023 Laboratory Accurate Electrodynamic Measuring Instruments

For accurate measuring of A. C. currents and voltages. Degree of accuracy: 0.2%. (Voltmeters, ammeters or wattmeters.)

28/024 Laboratory Instruments DLL

Designed for accurate measurement of D. C. voltages and currents. Degree of D. C. voltages and currents. Degree of accuracy: 0.2%. (V. A.) KOVO 28/025 **CLL Laboratory Phase Meters** 

Used for measurement of power factor in A. C. systems (Power-factor meters). KOVO

28/027 KLL Laboratory Frequency Meter

The same as the former but used for accurate measurement of frequency within the range 25—105% (Resonance system). Degree of accuracy: 0.5%.

KOVO

28/028 Terromet

A small and light measuring instru-ment of earth resistance. KOVO KOVO

28/029 Megmet

An insulation tester.

KOVO

28/030 Unimet

A universal measuring instrument used in workshops and laboratories. Designed for measurement of D. C. and A. C. voltages and currents, resistance, capacity and power output. Fitted with 43 measuring ranges.

28/031 Avomet

A small universal measuring instrument adapted for installation work, designed for measurement of D.C. and A.C. volta-ges and currents. Fitted with 32 measuring ranges.



28/024

28/032 Omega \_

Small Wheatstone bridges for reasonably accurate measurement of ohmic KOVO

### 28/033 Omega 1 \_

Wheatstone bridge used for measure-ment of ohmic resistance of max. 50.000 ohms. KOVO

### 28/034 Omega II —

Wheatstone bridge used for measurement of electrolytic resistance. KOVO

### 28/035 Omega III \_

Thomson bridge used for measurement of small ohmic resistance from 0.0001 to 20 ohms.

### 28/036 Pyromet

Optical pyrometer for measuring high temperatures without direct contact with the measured material, KOVO

## Nulomet

An instrument for checking electrical circuits provided with zero protection.

KOVO

# Small Installation Potentiometer

Used for measurement of very small voltages (max. 80 mV) without current loading the measured source. KOVO







### 28/037 28/039 Thermomet

A small and light instrument for measuring values of thermo-couples in my or centigrade degrees (°C). (Thermo-couples: Fe-Ko, PtRh-Pt, NiCr-Ni.) KOVO KOVO

### 28/040 Icomet

A small portable bridge for measurement of inductance, capacity and ohmic

### 28/041 Qw III Encased Set of Instruments,

transformers, switches and resistors for measurement of power, voltage, current in single or three-phase systems. KOVO

### 28/042 Sensivite Mirror Galvanometer

with suspended coil, fitted with pointer and mirror, designed for measurement of very small currents and voltages. KOVO

## 28/043 OS 20 Illuminating and Reading-

for mirror galvanometers. 28/044

# Small Pointer Galvanometer 40 ohms, designed for measurement of very small current values, no deflection when measuring with the use of zero methods.

#### 28/045 Clip-on Ammeter Skr 86

Designed for measurement of A. C. curpesigned for measurement of A. C. Currents without opening the circuit. Safe measurement in systems with working voltage of 22 kV. KOVO

### 28/046-047

Ammeters to be used with the clip-on ammeters. (Ammeters with range selection of up to 1000 A.) KOVO

#### 28/048 28/048 Small Clip-on Ammeter DSK 65

with change-over switch for different current ranges. Possibility of measure-ment in systems with working voltage of up to 650 V. KOVO

### 28/049 Small Rotary-Switch Decade Resistance Box

28/050 Large Precision Plug-Type Decade Resistance Box XLL

### KOVO 28/051

Large Precision Plug-Type Decade Resistance Box XLIX KOVO

### 28/052 MLG

Small rotary-switch Wheatstone bridge with built-in galvanometer designed for reasonably accurate measurement of ohmic resistance. KOVO

### 28/053 MLL

Large rotary-switch Wheatstone bridge designed for accurate laboratory measurements. KOVÕ

#### 28/054 MLLk

MILK
The same as the former but a plug-type
KOVO

## 28/055 MGK

Small Cable Bridge with built-in galvanometer, designed for fault localization of low-current cables. KOVO

### 28/056 OTK

Industrial Potentiometer designed for accurate measurements of D. C. voltages of up to 600 V; measurement of the ges or up to bob v; measurement of the e. m. f. of thermo-couples; calibration and checking of electrical measuring in-struments; measurement of resistance by means of resistance standards.

### 28/057

Large Rotary-Switch Precision Bridge, combination of the Wheatstone and Thomson bridges.

### 28/058 QmDs

KOVO

NTW

**QmDs**Set of instruments used to determine resistance of earth systems (Checking of safety of electrical apparatuses and appliances).

KOVO

28/052





28/033 Omega 1 —

28/034 Omega II —

28/035 Omega III —

28/036

Pyromet

Nulomet

28/038

Omega \_



28/024

KOVO

Small Wheatstone bridges for reason-ably accurate measurement of ohmic resistance. KOVO

Wheatstone bridge used for measure-ment of ohmic resistance of max. 50,000 ohms.

Thomson bridge used for measurement of small ohmic resistance from 0.0001 to 20 ohms.

Optical pyrometer for measuring high temperatures without direct contact with the measured material. KOVO

An instrument for checking electrical circuits provided with zero protection.

KOVO

Small Installation Potentiometer

Used for measurement of very small voltages (max. 80 mV) without current loading the measured source. KOVO







28/039 Thermomet

28/039

A small and light instrument for measuring values of thermo-couples in mv or centigrade degrees (°C). (Thermo-couples: Fe-Ko, PtRh-Pt, NiCr-Ni.)

KOVO

#### 28/040 Icomet

A small portable bridge for measure-ment of inductance, capacity and ohmic resistance. KOVO

# Qw III Encased Set of Instruments,

Wheatstone bridge used for measurement of electrolytic resistance. transformers, switches and resistors for measurement of power, voltage, cur-rent in single or three-phase systems.

### 28/042 Sensivite Mirror Galvanometer DGrz

with suspended coil, fitted with pointer and mirror, designed for measurement of very small currents and voltages. KOVO

### 28/043 OS 20 Illuminating and Reading-

for mirror galvanometers. 28/044

# Small Pointer Galvanometer

40 ohms, designed for measurement of very small current values, no deflection when measuring with the use of zero methods.

### 28/045 Clip-on Ammeter

Designed for measurement of A. C. currents without opening the circuit. Safe measurement in systems with working voltage of 22 kV. KOVO

### 28/046-047

Ammeters to be used with the clip-on ammeters. (Ammeters with range selection of up to 1000 A.) KOVO

#### 28/048 28/048 Small Clip-on Ammeter DSK 65

with change-over switch for different current ranges. Possibility of measure-ment in systems with working voltage of up to 650 V. KOVO

### Small Rotary-Switch Decade Resistance Box

28/050 Large Precision Plug-Type Decade Resistance Box

### KOVO 28/051

Large Precision Plug-Type Decade Resistance Box XLIX KOVO

#### 28/052 MLG

Small rotary-switch Wheatstone bridge with built-in galvanometer designed for reasonably accurate measurement of ohmic resistance. KOVO

#### 28/053 MLL

Large rotary-switch Wheatstone bridge designed for accurate laboratory measurements. KOVÔ

### 28/054 MLLk

MILLK
The same as the former but a plug-type

KOVO pattern.

### 28/055 MGK

Small Cable Bridge with built-in gal-vanometer, designed for fault localiza-tion of low-current cables. KOVO

### 28/056 QTK

QTK
Industrial Potentiometer designed for accurate measurements of D. C. voitages of up to 600 V; measurement of the e.m. f. of thermo-couples; calibration and checking of electrical measuring instruments; measurement of resistance standards, by means of resistance standards.

### NTW

Large Rotary-Switch Precision Bridge, combination of the Wheatstone and Thomson bridges.

#### 28/058 QmDs

KOVÓ

Set of instruments used to determine resistance of earth systems (Checking of safety of electrical apparatuses and appliances). KOVO



### 28/059 VPK

Voltmeter change-over switch for successive switching of several voltage circuits when measuring with one voltmeter.

## $\frac{28/060}{\mathrm{Tgm}}$

Pressure switch with rubber diaphragm for switching on/off of electromotors of air compressors and in waterworks during overpressure or pressure decrease.

### 28/061 RN Resistor Standards

designed for very accurate measurement of resistance as primary standards (resistance units). KOVO

### 28/062 W 100 Weston International Standard Cell

KOVO

### 28/063 QIK

Large Laboratory Potentiometer. When using the accessories (Weston standard cell, resistance standard) very accurate measurements, with the use of compensation method, of D. C. voltages, currents and ohmic resistance can be carried out.

KOVO



### 28/064 QsIK

Laboratory potentiometer table designed for very accurate measurements of D. C. voltages, currents and ohmic resistance.

### 28/065 QEK

Clip-on ammeter for measurement of D.C. and A.C. currents without opening the circuit in systems with working woltage of max. 650 V.

### 28/066 OPK

Cylindrical sliding resistors, used where it is required to connect a variable resistance into a circuit for purposes of current control.

KOVO

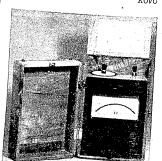
### 28/067 OOPK

The same as the former but fitted with a double cylinder. KOVO

#### 28/068 E 67

School Instrument for example measurement of D. C. currents and voltages.

KOVO



#### 28/069 Switchboard Measuring Instruments

intended to be mounted in panels. Circular scales, pointer deflection 240°. Used for measurement of D.C. and A.C. currents and voltages, power, and remote speed indication. KOVO

### 28/070 Exposure Meter

Used to determine effective aperture of lenses and exposure times in photography. KOVO



28/070







28/069

28/040

### 29 VACUUM TECHNIQUE

### 29/001 Electron Tubes

all-glass of standard design, miniature battery tubes with reduced heating input, miniature line tubes for series and parallel heating, modern noval line electron tubes for use in radios and TV-s, amplifying electron tubes of high and small capacities.

Vacuum and mercury rectifying electron tubes, electronic indicators tuned for all types of receivers, transmitting electron-tubes of small outputs up to a frequency of 200 Mc/s, screens for oscillograms and TV-s, recording electron tubes, supericonoscope used for television cameras, quanticon — for industrial television, monoscope — test picture — KOVO

### 29/002 Voltage and Current Stabilizers

miniature type, special electron tubes for measurements and allied purposes, phototubes — in which variations in applied light cause corresponding variations in electron emission, Geiger-Miller tubes used for measuring radioactivity and cosmic rays. — KOVO

### 29/003 Microwave Electron Tubes:

klystrons, magnetrons, ion tubes for radio locators; semi-conductor components: germanium point diodes in glass, flat germanium rectifiers for various voltages and currents 0.5 A and 0.5 A, germanium phototubes — semiconductive triodes dependent on light, transistors — 25 and 50 mW for l. f. purposes.

Voltmeter change-over switch for successive switching of several voltage circuits when measuring with one voltmeter.

## 28/060

Pressure switch with rubber diaphragm for switching on/off of electromotors of air compressors and in waterworks during overpressure or pressure de-

### 28/061 RN Resistor Standards

designed for very accurate measure-ment of resistance as primary stan-dards (resistance units). KOVO

### 28/062 W 100 Weston International Standard Cell

KOVO

### 28/063 QIK

180

Large Laboratory Potentiometer. When using the accessories (Weston standard cell, resistance standard) very accurate measurements, with the use of compensation method, of D. C. voltages, currents and ohmic resistance can be carried out.



QsIK

28/064

Laboratory potentiometer table designed for very accurate measurements of D. C. voltages, currents and ohmic resistance

### 28/065 QEK

Clip-on ammeter for measurement of D. C. and A. C. currents without opening the circuit in systems with working voltage of max. 650 V. KOVO

#### 28/066 OPK

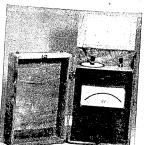
Cylindrical sliding resistors, used where it is required to connect a variable resistance into a circuit for purposes or control KOYO

#### 28/067 OOPK

The same as the former but fitted with a double cylinder. KOVO

#### 28/068 E 67

School Instrument for example measu-School Instrument for example interest rement of D. C. currents and voltages. KOVO



### 28/069 Switchboard Measuring

intended to be mounted in panels. Circular scales, pointer deflection 240°. Used for measurement of D.C. and A.C. currents and voltages, power, and remote speed indication.

#### 28/070 Exposure Meter

Used to determine effective aperture of Used to determine enective aperture clenses and exposure times in photography KOVO



28/070







#### 29 VACUUM TECHNIQUE

### 29/001 Electron Tubes

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Vacuum and mercury rectifying electron tubes, electronic indicators tuned for all types of receivers, transmitting electron-tubes of small outputs up to a frequency of 200 Mc/s, screens for socillograms and TV-s, recording electron tubes, supericonoscope used for television cameras, quanticon—for industrial television, monoscope—test picture—KOVO KOVO

### 29/002 Voltage and Current Stabilizers

miniature type, special electron tubes for measurements and allied purposes, phototubes — in which variations in applied light cause corresponding variations in electron emission, Getger-Müller tubes used for measuring radioactivity and cosmic rays. KOVO

### 29/003 Microwave Electron Tubes:

klystrons, magnetrons, ion tubes for radio locators; semi-conductor components; germanium point diodes in glass, flat germanium rectifiers for various voltages and currents 0.3 A and 0.5 A, germanium phototubes — semiconductive triodes dependent on light, transistors — 25 and 50 mW for 1. f. KOVO purposes.

### 29/004 Lamps

for illumination, railways, aircraft, vehicles, medical, projection, drying, photography, mines, glowlamps, signalling and stabilising, fluorescent lamps 20 W, 25 W, 40 W for illumination. KOVO

Thyratrons 25 kW/1000 A

of current. The maximum value of the controlled output is 12.5 MW.

Tacitron 80 mA and 500 mA

This is a thyratron with a special construction of the grid enabling to interrupt the burning discharge by applying a negative potential to the control grid (negatively biased grid).

### 29/007

Rectifying Discharge Tube with a cold cathode 2 kW/4 mA

This is a valve used to rectify high voltages ranging from industrial to acoustic frequencies. Its properties make the valve particularly suitable for all sources of high voltage (requiring no heating-coil and, consequently, no insulation of the H. T. side of the transformer). This discharge valve is of the miniature high voltage type.

### 29/008

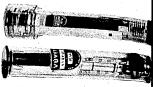
Rectifying Discharge Tube with a cold cathode 1 kW/100 uA . 13 TA 9:

subminiature type, fielled with argon, This tube can be applied for measurements of alternating currents ranging from industrial to acoustic frequencies. Its characteristic values make it suitable for high-voltage sources in special transmission plants.

### 29/009

Screen 181 QP 44/M

for electronic finders of TV cameras, control monitors and industrial television applications. Useful screen area 105×140 mm.



### 29/010

Quanticon 41 QV 40

This is a recording electron tube operating on the photoconduction phenomena. The split electron-tube is brought by the recording ray to the potential of the cathode. Outer dimensions 35×165 sions: 25×165 mm.

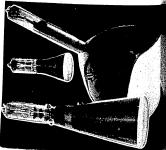
### 29/011 Resisticon 63 QK 41

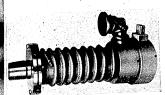
is an accumulating recording electron tube with a rapid beam. Applied for recording in studios and for transmission. It has a good ratio between signature to the studies and the studies are the studies and the studies are the studies and the studies are and hum also in only slightly illuminated sceneries.

### 29/012 Superorthycon 61 QM 40

is a recording electron tube with a slow ray used for slightly illuminated sceneries.







Oil Diffusion Suction-Pump

This suction pump of 500 to 5.000 litre/sec pumping speed with its control valve block and gauges forms a complete vacuum unit for evacuating

metallized equipments and vacuum de-aerating and metallurgical furnaces. It is also used in atomics.

Vacuum Unit 500 litres/second

Pumping speed 500 to 700 litres/sec. Final vacuum (without freezing) < 2.10-° mm Hg. Admissible starting vacuum 0.1 to 0.3 mm Hg.

Oil Diffusion Suction-Pump 500 litres/second

Pumping speed 5000 to 8000 litres per second. Admissible starting vacuum 0.1 to 0.5 mm Hg. Final vacuum  $<2.10^{-6}$  mm Hg.

## RADIO RECEIVERS — RADIO-GRAMS — MAGNETIC RECORDERS **30**

### 30/001-030 Table Receivers

are modern superhet receivers in boxes made of plastics or polished wood; besides standard wave ranges, numerous types are also equipped for receiving frequency modulated radio transmissions, and are provided with change-over pushbuttons, a ferrite antenna and efficient control of high and low tones. A high-quality tone is guaranteed by means of several loudspeakers.

30/031-050



30/001-030

### 30/031-050 Table Radio-grams

of various sizes for radio reception on standard wave bands as well as for reproducing gramophone records.



### 30/051-060 Musical Boxes

Musical Boxes

present suitable furniture supplements. They are used for the reception of radioprogrammes as well as for the reproduction of gramophone records. The boxes are designed for superbacoustics and accommodate the chassis, the modern three- or four-speed gramophone and the magnetic recorder. The carefully selected reproducing combination guarantees top class reproduction of musical programmes. KOVO

### 30/061-080

## Portable Case-type Receivers

Portable Case-type Receivers

according to choice either portable for various wave ranges or hand-bag type for the reception of medium waves, are of modern design, in two-colour cabinets made of plastics.

The receivers are fitted with modern valves of small power consumption and ferrite aerials. They can be connected to the mains (hand-bag receivers by means of a special equipment).

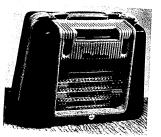
KOVO

### 30/081-100 Magnetic Tape Recorders

Magnetic Tape Recorders

for recording and reproducing sound are mounted in an elegant case; they enable double imprint records at speeds of 19.05 and 9.5 m/sec and quick transport of the tape in both directions. They are provided with connectors for a modulating line and a headphone. The Magnetic-Recorder Adaptor can be used in conjunction with all standard gramophones. It enables double-imprint records at a tape speed of 19.05 m/sec.





30/061---080

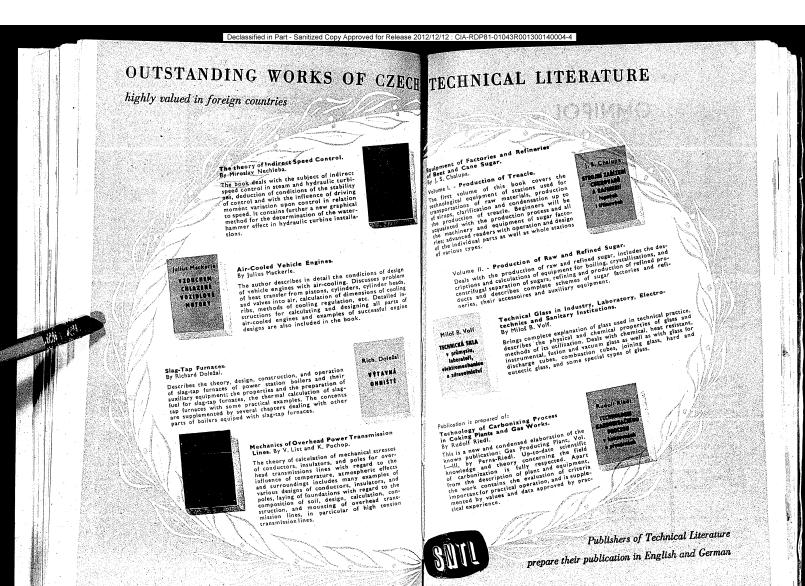




Organic and inorganic chemical products Tar dyescuffs Synthetic resins Fine chemical Pharmaceutical products and intermediates Dental products. etc. call



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## OMNIPOL Ltd.

PRAGUE 3, Washingtonova 11 CZECHOSLOVAKIA

EXPORT AND IMPORT OF SPORTS
AND TRANSPORT AIRCRAFT AND SPORTS
AND HUNTING ARMS



Sports and Tourist Aircraft
Training Aircraft
Sailplanes
Transport Aircraft
Aircraft Engines
Propellers
Aircraft Instruments

Sports Arms Hunting Arms Ammunition Pyrotechnical Goods

### 31 TELEVISION SETS

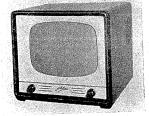
### 31/001 TV Sets

of the table or stand type for the reception of television programmes. According to the quality class they have screens of 36, 43 and 53 cm diagonals and different numbers of reception channels.

### 31/002

### Television Aerials

KTA 3/70 for receivers up to a range of 60 km or 37.3 m. KTA 1/70 for receivers up to a range of 15 km or 9.32 m. KTA 6/24 for receivers of foreign television programmes.



31/001

## 32 REPRODUCTION EQUIPMENT

#### 32/001 Reproducers of the Standard Series

are divided in normal type "O", elliptical "E" and pressure (altitude) type "T". The common feature of all reproducers of the standard series is the wide frequency range and the suppressed subharmonic oscillations. A special type is the listening crystal reproducer, the so-called whisperer.

### 32/002 Box Reproducers

applied in local transmission for installation in various reproducing systems of the standard series with an adjusting transformer for a 100 V system. KOVO

### 32/003 Directional Reproducers

applied in local transmission for installation in out-of-door spaces. Reproducers with standard systems for an input of 6 and 12,5 W are provided with an acoustic system in suitably damped

double walls. The enclosures of the reproducers accommodate the adjusting transformers for the 100 V system. KOVO

#### 32/004 Home-Combinations of Reproducers "Hi-Fi"

are self-contained units assembled from several reproducer systems. By their faithful reproduction and frequency range these combinations fulfill all conditions of high-quality reproduction.

# **32/005**Reproducer Combinations for Sound Cinemas

operate on the cell principle with reproducer systems of the standard series in an enclosed housing. KOVO

### 32/006 Microphone with Accessories

for application in local transmission.

Dynamic crystal or reporting types (particularly for transmission from noisy surroundings).

KOVO

### 32/007 Crystal Pick-Up

The crystal pick-up with a crystal of Seignett salt is intended for quality-pick-up of gramophone records with standard grooves and micro grooves. The pick-up has a wide frequency, small pressure on the point and a small side stiffness.

### 32/008 Electro-Acoustic Earphones

for deafish persons, equipped with electron tubes. It is assembled from three parts: the amplifier with the microphone, the battery holder and the ear-

phone. This device can be adjusted to the individual needs of the user by gradually varying the amplicification by means of the potentiometer or by adjusting the change of the frequency graph by means of the correction changer. changer.

### 32/009 Magnetic Tape Recording Adaptor

for recording audio programmes on a magnetic tape in conjunction with a gramophone which drives the tape, and a radio receiver for the repro-duction. The play time is twice 15 mi-

#### 33 PHOTO - CINE - OPTICS

### Spectacle Frames and Sun Goggles

Sun goggles of various shapes and colours made from polyamide with orientated hinges, practically indestructible (Czechoslovak patent). Spectacle frames of celluloid, frames with adornments or combined with metals, frames of synthetic glass (plexi-glass) and acetate-cellulose.

### 33/029 Club Projector 16

A sound projector for 16 mm film, with sound head and a possibility of reproduction of both optical and magnetic film records; the magnetic recording provides the possibility of home-made sound records.

### 33/030

Diaprojector  $6\times6$ 

for projecting of 6  $\times$  6 cm diapositive slides.

### 33/031 Meopton I

Professional-type stationary sound pro-jector for 16 mm film with adapter for slide projection. Available with a POLAR lens f/1.3, (or f/1.5), F = 40 mm or 60 mm, respectively. Dustproof pro-jector head, 1000 W projection bulb.

### Meopton II

Professional - type grand - performance stationary sound projector for 16 mm film; for small-type public cinemas and lecture halls. KOVO

### Meopton III

New professional-type stationary sound projector for 35 mm film; fully encased; for medium-size cinema halis intended for 400 spectators approx. Available with lens of various systems, speeds and focal lengths according to the given hall requirements. KOVO

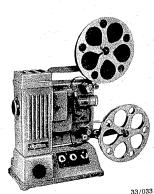
#### 33/032 Projector Reel

for 8 mm, 16 mm and 35 mm films in various capacities. KOVO

### 33/033 Optilux

KOVO

Cine projector for 8 mm film designed Cine projector for 8 mm film designed for amateurs, institutes and schools, with a 500 W projection bulb, a POLAR lens t/1.3, F=25 mm. Fitted with reverse run: it is supplied with an autotransformer for conventional mains voltages from 110 V to 240 V. KOVO



### 33/034 Opemus 4×4

Amateur-type precision enlarger, with oblique rod, for negatives up to 4×4 cm in size, BELAR lens 1/4.5, F = 55 mm, plano-convex condenser 58 mm in dia.

### 33/035 Opemus 6×6

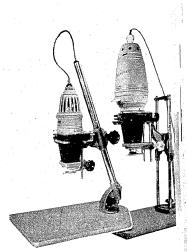
Amateur-type precision enlarger for negatives up to  $6\times6$  cm in size, BELAR lens f/4.5, F = 75 mm, double-condenser 98 mm in dia.

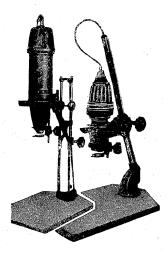
### 33/036 Opemus II 6×6

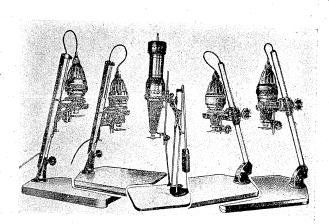
Semi-automatic precision enlarger with slit-focusing, for both black-and-white and colour photography, for negatives up to  $6\times 6$  cm in size, BELAR lens f/4.5, F=75 mm, with snap-in iris diaphragm, slit-system metal easel and two glasses.

### 33/037 Magnifax 6,5×9

Precision enlarger for both amateurs and professionals for negatives up to  $6.5\times9$  cm in size, BELAR lens f/4.5, F = 105 mm, double-condenser 120 mm KOVO in dia.







### 33/038 Magnifax II 6×9

Semi-automatic precision enlarger with slit-focusing, for both black-and-white and colour photography, for negatives up to 6×9 cm in size; BELAR lens fl/45, F=105 mm, with snap-in iris diaphragm, slit-system metal easel, adjustable film guide pins, sliding-type masks and two glasses.

### 33/039 Magnitarus 10×15

Precision enlarger for use in scientific institutes and laboratories, for enlarging from negatives up to  $10\times15$  cm in size, BELAR lens f/4.5, F = 180 mm, double-condenser 200 in dia. KOVO

### **33/040** Magnitarus 13×18

Precision enlarger for use in scientific institutes and laboratories, for enlarging from negatives up to  $13\times18$  cm in size, BELAR lens f/4.5, F=210 mm, double-condenser 240 mm in dia.

### Hercules 18×24

Precision enlarger for use in research institutes and laboratories, for negatives up to  $18\times24$  cm in size, BELAR lens f/4.5, F = 300 mm, condenser 320 mm in dia.

### 33/041 Axomat 24×36

Semi automatic precision enlarger for both black-and-white and colour photography, for negatives up to  $24 \times 36$  mm in size (Leica-size), or for those made on 16 mm film; BELAR lens 1/4.5, F=50 mm, with snap-in diaphgram, easel with slit-focusing equipment and negative number checking window.

### 33/042 Micromax

Semi-automatic precision enlarger with slit-focusing, of the same design as the Axomat, suitable for enlarging from negatives  $11\!\!\times\!\!14$  mm on 16 mm film, i. e. from negatives made with the Microma camera; MIRAR lens, 1/3.5, F = 35 mm.

### 33/043 Meocolor Adapters

Adapters for precision enlargers enabling colour enlargements to be made; serve for inserting of compensating colour filters with a heat-protecting KOVO

# 33/044 Compensating Colour Filters $75\times75$ mm - $135\times135$ mm

a set of 33 filters used for colour photography; for enlarging by means of the Meocolor Adapter. KOVO

### 53/045 Equalizing Filters $75\times75$ mm $135\times135$ mm

Supplement to the compensating colour filters for finding a suitable combination of compensating colour filters while enlarging; a set consisting of 5 filters.

### 33/046 Reproducing Bracket

Accessories to precision enlargers; in combination with a photo camera serves as a reproducing apparatus, i. e. suitable for reproducing from patterns.

### 33/047 Masking Equipment 18×24 cm

Accessories to precision enlargers, for masking the borders of enlarged pictures and for holding the photographic paper up to  $18{\times}24$  cm in size.

### Masking Equipment 30×40 cm

Accessories to precision enlargers for masking the borders of enlarged pictures and for holding the photographic paper up to 18 × 24 cm in KOVO

### 33/048 Focusing Equipment

for precision enlargers; for easy focusing of the image to be enlarged.

### 33/049 Flexaret II

Simple-type twin-lens precision reflex camera for twelve  $6\times6$  cm pictures on  $6\times9$  cm (B2) film, MIRAR taking lens f/4.5, F = 80 mm, special anastigmat viewing lens f/3, F = 80 mm, METAX central shutter, adjustable to "B" time exposures and snapshots from 1 to 1/400 sec, central-focusing. KOVO

### 33/050 Flexaret IV

Semi-automatic twin-lens reflex camera for twelve  $6\times 6$  cm pictures on  $6.5\times 9$  cm film. BELAR taking lens 1/3.5, F=80 mm, MIRAR viewing lens 1/3, F=80 mm, depth of focus scale on focusing lever, release on camera body, semi-automatic viewfinder, interlocking device preventing double exposures and film advance without exposure.



33/051---052

### 33/051 Flexaret IVa

Semi-automatic reflex camera for twelve  $6\times 6$  cm pictures on  $6.5\times 9$  cm roll-film, with adapter suitable for use with 35 mm cine film. Rewind knob fitted with indicators of the kind of film used. Outfit similar to that of the Flexaret IV.

189

side (Sachille)

### 33/052 Flexaret V

Full-automatic twin-lens reflex came-Full-automatic twin-lens reflex camera for two pictures izes, i.e. for twelve 6×6 cm pictures on 6×9 (B2) film, or 36 pictures 24×36 mm in size on 35 mm cine film. BELAR taking lens 1/35, F = 80 mm, anastigmat viewing lens 1/3, F = 80 mm, PRONTOR SVS central shutter adjustable to "B" time exposures and snapshots from 1 to 1/500 see central focusing. \*\*VOVO\*\* KOVO 1/300 sec, central focusing.

#### 33/054 Pioneer II

An inexpensive popular-type bakelite camera for beginners, for twelve 6×6 cm pictures on 6.5×9 cm roll-film or for sixteen 4.5×6 cm pictures when used with a 4.5×6 cm adapter. Six-lens. Flash-light connection.



33/055 33/055

Full-automatic miniature-size camera for 50 pictures  $11\times14$  mm in size on 16 mm film. Segment-shutter, adjustable to 'B' time exposures and snapshots from 1/5 to 1/400 sec, film advance combined with simultaneous cocking the shutter by means of a lever, optical type open frame finder, flashlight connection, MIRAR lens t/5.5, F=20 mm.

### 33/056 Magnola

Microma II

Folding camera designed for accurate, technical, scientific, etc., work, for pictures of architecture, for professional portrait photography, reproductions on dry plates or flat films up to a size of 15×18 cm.

### 33/057 Enlarger Lenses

BELAR, four-glass, three-element asymmetric semi-balsamed anastigmats in mounts with standard type or snap-in iris diaphragms.

#### 33/058 Admira 8 E

Amateur-type motion picture camera for  $2\times8$  mm film; MIRAR lens f/2.8, F = 12.5 mm, open frame finder with parallax compensation, frequency con-troller from 10 to 64 frames per se-cond; with acoustic scene length checking, spring-type drive, release enalling normal filming and single-shots.



33/059 Admira 8 II

Design and appearance corresponding to that of the Admira 8 E, however, with a two-lens turret; standard type MIRAR lens f/2.8, F = 12.5 mm, TELE-MIRAR lens f/3.5, F = 35 mm.

### Filters to the Admira 18 mm and 22 mm in dia

for correct transfer of colours to the grey shades scale. KOVO

### 33/060 Trigger-type Holder

to Admira cameras; enables the camera to be held firmly, makes filming easier and enhances the readiness-foraction of the camera.

### 33/061

### Macro-Equipment 8 II

additional accessories to the Admira 8 II Motion Picture Camera for filming tiny objects and small-size titles; in-dicates the correct distance from the pattern and proper cutout of the shot.

Macro-Equipment 8 E

Similar accessories designed to the same purpose as the foregoing, however, intended for the Admira 8 E Motion

### 33/062

### Admira 16 A

A new motion picture camera for 16 mm film; for 30 mm film-rolls in day-light packing; battery-drive; one KOVO

### MEO 8 Projector

# for home projection; simple and light-weight construction, case-type, 200-500 W projection bulb, POLAR projection lens, f/L.5, $F=\overline{18}$ mm, for reels taking up to 120 m of film, voltage: 110 V and 220 V.

33/064 Editing Table 8 mm and 16 mm case-type, for examining, rewinding and splicing of 8 mm or 16 mm film; fitted with film length counter and acoustic scene length checking. KOVO

### Set of filters for the Microma

A leather case comprising a complete set of compensating colour filters for the Microma camera (G 1, G 2, G 3, GGR 1, GR 1, R 1, B 1, UV).

### 33/068 Reproducing Equipment for the

Opemus II Slit-focusing system easel with space for inserting a  $6.5\times9$  cm magazine for reproducing of  $6\times6$  cm pictures by

means of the Opemus II Enlarger on dry plates  $6.5\times9$  cm or flat films  $6\times9$  cm.

### 33/069 Set-up Shutter

Segment-type two-laminae central shutter, to be attached to lens mounts up to 38 mm in dia, with "B"and "T" time exposures; wire-release. KOVO

## Short-type Tripod Reducing Sleeve

Reducing sleeve with thread for attaching the OPEMUS II enlargers to the photographic tripod while enlarging.

KOVO

### 33/071

### Meopar Objectives

five-lens three-element anastigmats. Also available for f/4.5 and focal distances of 180, 210 and 300 mm.

#### 33/072 Slide Projector 11×14 mm

Small-size slide projector suitable for projecting of slides from pictures made with the Microma camera, adjusted to a size of  $5\times 5$  cm; 50 W bulb, 110~V.

### 33/073 Push-button Release

for wire release of the Flexaret IV and IVa reflex cameras; to be attached to the threaded nipple. KOVO

### 33/074 Base-board with Drawer

Polished-wood base-board 400×575 mm in size to the Opemus and Magnilax enlargers, with drawer for keeping sensitive paper or petty accessories. Dimensions: 318×426 mm. KOVO

### Reproducing Equipment for Magnifax II

Slit-focusing system easel with space for inserting a 6.5×9 cm magazine, for making reproductions and pictures by means of the Magnifax II Enlarger. The equipment incorporates also an easel with a nut for measuring, outlining and checking of the picture. KOVO

#### 33/076

Masking Equipment for Exposure

Sliding equipment with a longitudinal cutout for exposure tests for both black-and-white and colour enlarging and for determining the suitable kind of filter for colour enlarging. KOVO

### Macro-Adapter for Magnifax II

A short and a longer tube for extending the range of lens extension, for reproducing and making enlargements from tiny objects by means of the Magnifax II Enlarger. KOVO

#### Macro-Adapter for Opemus II

Accessories to the Opemus II Enlarger designed for making macro-pictures of tiny objects by means of the reproducing method.

KOVO

#### 33/078 Opemus Illuminator

A holder with two lamps connected by flexible tubes, to be attached to the stand with oblique-rod enlargers for illuminating of patterns and objects while reproducing and while making macro-pictures of tiny objects by means of the enlarger. KOVO

#### 33/079 Magnifax Illuminator

A holder with two lamps connected by flexible tubes, to be attached to the rod stand, for illuminating of patterns and objects while reproducing and making macro-pictures of tiny objects by means of the Magnifax Enlarger.

#### 33/080

Reproducing Equipment for the

Simple device for reproducing by means of the Microma camera; indicates the correct object distance and proper cutout of the shot.

#### 33/081 Anamorphot

Auxiliary prism-system for wide-angle projection of 35-mm film with invariable anamorphosis.

#### 33/085 Type 120 Rewinder

for quick rewinding of 8-mm and 16-mm films, with folding brackets for reels taking up to 120 m of film.

### 33/086

two-glass condensers in mounts of various diameters.

#### 33/087 Condenser Inserts

for inserting of smaller-size condensers into large size enlargers.

#### 33/092 Cine projection lenses

POLAR, POLAR-SPECIAL and STIGMAR projection lenses to enlargers for use with 8-mm, 16-mm and 35-mm film, of various speeds and focal lengths.

#### 33/094 Rewinders

for rewinding of 8-mm or 16-mm film. KOVO

#### 33/095 "Trimat" Splicer

for splicing of three film dimensions, i. e. 8-mm, 9.5-mm and 16-mm; made from non-corrosive material. KOVO

#### 33/096-097

Binoculars

for look-out, tourist and hunting pur-poses; suitable also for military use, for observing at sea, etc. KOVO

### Universal Abbé Refractometer

for chemical analyses; consists of a telescope and a pair of compensating

#### Manual Refractometer I, II, III

for determining the percentage of sugar content in solutions, particularly for use in sugar industry (for determining the sugar content of sugar-beet). ning the sugar content of sugar-beet). Suitable for use in fruit-tree culture when used with certain necessary sup-

#### Immersion-type Refractometer

An instrument for measuring the refractive index of liquids in breweries and similar industrial works whee it used as a substitute for lengthy chemical analysis. Measuring range from nd=1.32656 to nd=1.37135. KOVO

#### 33/099 Auxiliary Lenses

to be slipped-over the lens in case shots within a distance smaller than 1 m are to be made KOVO to be made.

### DRUEX Photographic Camera

A bakelit camera, size  $6 \times 6$  cm with The Dukelit camera, size  $b \times b$  cm with a Druo all-metal shutter, exposure times 1/25, 1/50, 1/100, B with a three lens anastigmat of the DRUOPTAR type, lens speed F=1:6,3,f=75 mm.

#### 33/101 VEGA III

All-metal photographic film camera for 35 mm films, size  $24\times36$  with Druoptar 3,5 objective, f = 50 mm, Chrontax shutter, 1/10, 1/25, 1/50, 1/100, 1/200, T, B.

#### 33/102 Bakelite Photographic Camera

for 12 snapshots, size  $6\times 6$ , with an achromatic objective 1:8, f = 75, 1/50, 1/100, diaphragm 8, 11, 16, 22.



33/103

#### 33/103 Children Slide Projector

DIOS batteries used, for slide films  $24 \times 36$  and  $24 \times 18.$ 

#### 33/104 All-metal Slide Projector

#### 33/105 Double-sided Photographic Print

type 2450 for amateurs. It is provided with two polishing sheets and a lead-in cable. Input 220 W.

33/101





33/106

33/109

#### 33/106 Double-sided Photographic Print

Type 660 for polishing and drying of photographs. Input 600  $\ensuremath{W}\xspace$ 

### **EXPONET B 3 Exposure Clock**

for determining of exposure time; when setting the switching button for the period from 3/10 to 6 seconds or for the period from 6 to 60 seconds.

#### 33/108 Panoramatic Head

to be attached to a photo or cine tripod fitted with conventional threads  $1/4^{\prime\prime}$  and  $3/8^{\prime\prime}$ , for panning the pictures.

KOVO

### 33/111 Exposimeters An instrument for measuring the exposure time for both black-and-white and colour film; supplied with a case.

for the Admira for making single or

Interchangeable Eyepieces Accessories for Admira users with defective sight; available up to plus or minus 3 diopters.

KOVO

Securing Release

continuous shots.



### CZECHOSLOVAK ECONOMIC BULLETIN

informs commercial circles and persons interested in this line on the trade relations of the Czechoslovak Republic with all countries of the world and its building up. Published monthly by the Chamber of Commerce of Czechoslovakia.

#### SPORTING AND HUNTING ARMS 34

#### 34/001 Slavia 603

calibre 4.5 mm for target practice and sport shooting at a range of 15 metres. Designed for Diabolo ammunition. Weight 2.6 kg, length 1025 mm. OMNIPOL

#### 34/002 Slavia 608

calibre 4.5 mm for youths up to the age of 10 years for target practice and sport shooting. Weight 0.85 kg, length 780 mm.

#### 34/003 Slavia 612

calibre 4.5 mm for target practice and sport shooting for youths up to the age of 10 years at a range of 8 metres. Weight 1.2 kg, length 850 mm.

PRAGOEXPORT

#### 34/004

Slavia 615

calibre 4.5 mm for target practice and sport shooting for youths from 10—12 years of age at a range of 10 metres. Weight 1.5 kg, length \$80 mm. PRAGOEXPORT

#### 34/005 Slavia 618

calibre 4.5 mm for target practice and sport shooting for youths from 12—15 years of age at a range of 12 metres. Weight 1.55 kg, length 860 mm. PRAGOEXPORT

### 34/006

calibre 4.5 mm for target practice and sport shooting at a range of 10 metres. Weight 1.80 kg, length 949 mm, number of grooves 12.

#### 34/007

calibre 4.5 mm for target practice and sport shooting at a range of 10 metres. Weight 2.55 kg, length 1055 mm, number of grooves 12.

#### 34/009 Sport Halfstock Model 47

for target practice and sport shooting with pellets of 4.45 mm in diameter at a range of 25 metres. Weight 3.45 kg, length 1080 mm. OMNIPOL length 1080 mm.



34/010

#### 34/010

ZVP Air Pistol

calibre 4.5 mm for target practice and sport shooting, particularly indoors, with Diabolo ammunition. OMNIPOL

Air Rifle with a 30 Shot Magazine

single shot, break-type barrel, for target practice of adults, suitable for shooting of small vermin with 4.5 mm Diabolo ammunition.

OMNIPOL

#### 34/012 Slavia 070 Alarm Starting Pistol

six shot, used for starting, for training of hunting dogs and watch dogs, for stage shooting and for psychological self-defence. It is designed for 6 mm Start cartridges. Weight 0.27 kg, length 0.00 mm. 100 mm.

#### Automatic Pistols

#### 34/013 ČZ 7.65, Model 50

with a magazine for 8 rounds. Weight 670 g, overall length 155 mm, length of the barrel 99 mm. OMNIPOL



34/012

#### 34/014 ČZ 6.35

with a magazine for 8 rounds of 6.35 calibre for self-defence. It has the advantages of the revolver as well as of the pistol. Weight 430 g, length 128 mm. OMNIPOL

#### 34/015 DUO 6.35

is an up-to-date automatic weapon with a magazine for six rounds for self-defence. Manufactured in two colours: black and nickel plated. Weight 370 g, length 114 mm. OMNIPOL

#### 34/016 ZKP. 504 Target Pistol

calibre 4 mm, single shot, break type for indoor shooting. Weight 780 g, length 270 mm. OMNIPOL

#### 34/017 ZKP 541 Universal Automatic Pistol

This pistol by exchanging of a few parts can be assembled either as a sport, target or a rapid fire pistol. Each type can be assembled to take a cartridge .22 long rifle, or five .22 short cartridges. OMNIPOL short cartridges. OMNIPOL.

#### 34/018 Sport Smallbore Pistol . 22 Long

OMNIPOT.



34/015

#### Sport Smallbore Pistol . 22 Short OMNIPOL

#### 34/020 ZKR 551 Revolver

a six shot revolver, calibre 9 mm (38 SW) designed for accurate target shooting. Weight 1 kg, barrel length 152 mm. OMNIPOL

#### Smallbore Rifles

#### 34/022 ZKM 452 (Brno 2)

for sport and hunting (shooting of vermin). Magazine for 5 rounds . 22 long rifle, on request a 10 round magazine can be supplied. Weight 3 kg, barrel length 630 mm. OMNIPOL

#### 34/023 ZKM 456 (Brno 4)

for .22 long rifle exclusively, is designed for contest and target practice shooting and equipped with telescopic sights. Weight 4.5 kg, overall length 1150 mm, barrel length 700 mm, sight length with the telescopic sight 825 mm.

OMNIPOL

#### 34/024 **ZKM 468**

single shot, for hunting only, calibre 5.6 mm long rifle or 9 mm. Weight 2.10 kg, length 935 mm. OMNIPOL

#### 34/025 ZKM 561 Automatic Smallbore Rifle

a hunting gun with dynamic action, ta-king. 22 long rifle cartridges. Box ma-gazine for eight rounds. Weight 2.80 kg.

### ZKM 457 Smallbore Target Rifle

specially adjusted for contest shooting. It is designed according to internatio-nal contest shooting regulations. Weight 6 kg.

OMNIPOL

#### 34/027-030 Double Barrelled Shotgun

Light, simple hunting gun with a re-liable breech and a durable, trouble free firing mechanism for shooting small game with shot filled cartridges. Weight: Bore 16 2.80 kg, Bore 12 3.10 kg.

Supplied in the following types: ZP 45 bore 16 with extractor ZP 50 bore 16 with ejector

ZP 47 bore 12 with extractor ZP 49 bore 12 with ejector OMNIPOL

### Over and Under Shotgun Bore 12

for hunting and sport shooting, a simple design of mutually independent barrels with the possibility of choke

bore exchange, fitting of muzzle brake or a compensator.

### ZH 101 Over and Under Shotgun Bore 12

hunting and sport shotgun with two barrels placed over each other; both barrels have an exchangeable choke bore. Trigger mechanism has either one or two triggers. It is designed for hunting, battery or skeet shooting: OMNIPOL

#### 34/033 ZKW 465 HORNET Smallbore

of great efficiency for hunting, parti-cularly suitable for shooting of me-dium sized vermin with 5.6×36 R car-tridges, 5 round magazine. Weight 2.85 kg, length 1040 mm. OMNIPOL

#### 34/034 BRNO 21 Smallbore Rifle

designed exclusively for hunting, half stock, five round magazine. Produced in the following calibers: 6.5×57, 7×57, 7×64, 8×57 S, 8×60 S. Weight 3.10 kg, length 1065 mm.

#### BRNO 22 Rifle

full stock, designed for hunting, otherwise the same execution as BRNO 21 rifle. Weight 3.27 kg, length OMNIPOL

#### 34/035 ZG 47 Rifle

The receiver of the breech is provided with rails for mounting of OP  $\times$  4 or Lesar 3  $\times$  telescopic sight. This rifle is expecially suitable for shooting of big and tropical game. It is produced in the following calibers:  $7\times57$ ,  $7\times64$ , and tropical game. It is produced in the following calibers:  $7\times57$ ,  $7\times64$ , 270 W 30-06 ( $7.62\times63$ ),  $8\times57$  S,  $8\times60$  S,  $8\times64$  S,  $95\times62$ ,  $5.6\times61$  von Hoffe. Weight 5.40 kg.

Are you interested in Czechoslovak products?

## CZECHOSLOVAK FOREIGN TRADE,

a periodical of the Chamber of Commerce of Czechoslovakia, regularly contains reports on traditional export articles as well as novelties of the Czechoslovak industrial production.

#### 34/036 ZG 47 - light model

for cartridges of medium calibers:  $6.5\times57$ ,  $7\times57$ ,  $7\times64$ ,  $8\times57$  S, .270 W, 50-06. OMNIPOL

#### 34/037 ZG 47 T Olympia Champion Target Rifle

A heavy large caliber rifle for international shooting contests — range 300 m. The weight is adjustable in the range from  $8-9~\mathrm{kg}$ . OMNIPOL

#### 34/038 JAT 54-I Universal Slaughtering Apparatus

for safe and reliable stunning of slaughtering animals. OMNIPOL

34/039

### 34/039 Cattle Slaughtering Apparatus

for killing of slaughtering animals. OMNIPOL

#### 34/040 ZVK Clay Pigeon Trap

for skeet and battery contest shooting. Minimal range of the clay discs is  $55~\mathrm{m}.$ 

#### 35 MECHANIZED OFFICE

#### 35/001 CONSUL 1501-D Typewriter

Length of carriage: 18" (46 cm.). Standard PICA 1 or small ELITE types. Standard column or decimal tabulators. Keyboards for all world languages with Roman, Russian or Greek letters.

#### 35/002 CONSUL 1502-B Typewriter

Length of carriage: 13" (32 cm.). Standard PICA 1 types with column tabulator. Keyboards for all world languages with Roman, Russian or Greek letters.

#### 35/003 CONSUL 1515 Portable Typewriter

streamlined, with all functions of a standard typewriter. Number of keys: 44. Weight: 9.5 kg. including case. KOVO

198



35/001

# 35/004 CONSUL 1517 Typewriter

A simplified model of the portable typewriter, without tabulator and with one-colour ribbon and margin stops. Number of keys: 42. KOVO





35/005

#### CONSUL 1521 Electric Adding Machine

The keyboard contains mine keys. Direct subtraction. Minus totals are recorded in red. The check register enables to follow the calculating process. It checks the set figure before it is transmitted into the counter and recorded on the paper tape. Speed: 132 strokes per min.

### 35/006 NISA "P" Calculating Machine

This hand lever (drum type) calculating machine has a capacity of 10×8×16 with decimal places carried over in the proof register.



35/004

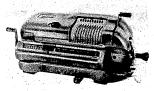


35/007

### 35/007 NISA "K" Calculating Machine

is a full column hand-calculator with a capacity of 8×8×16. KOVO

35/006



### NISA "EK" Calculating Machine

is an electrically operated full column keyboard calculating machine with a keyboard capacity of  $8\times8\times16$ . KOVO

#### NISA "EK 1" Calculating Machine

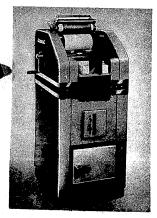
Electrically operated full column keyboard calcuting machine with a keyboard capacity of  $8\times8\times16$ .

#### NISA "K 1" Calculating Machine

Hand operated full column keyboard calculating machine with a keyboard of  $8\!\times\!8\!\times\!16.$ 

#### NISA "C"

hand operated device for simple cal-



#### 35/012 ROMINOR Offset Printing Machine

This offset printing machine operates on the principle of separation of water from grease. It is also suitable for multicolour prints. The positive image is transmitted from a metal sheet.

35/012

Kovo

### MAGNETOFON Dictaphone

Reproduction and other machines Phototypic process machine with 2 car-

35/013

# 35/013 ROMAYOR Offset Printing

This electric offset printing machine operates on the 'principle of separation of water from grease. It is also suitable for multicolour prints. The positive image is transmitted from a metal short. metal sheet.

#### 35/014 S-01 Phototype Machine

For multiplication of technical documentation such as drawings, plans, etc. made on tissue paper. Lighting set: Two arc lamps of 2 kW. Motor output 250 kW. put 250 W.

### 35/023

### 35/024

bon filament lamps, ammonia developer, OPTIREX epidiascope, REF recorder, REPROSCOP reader, OP 5×5 dia-

### Office Machine Accessories

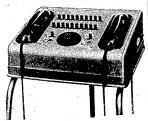
for typewriters, duplicating, printing and line drawing machines, dicta-phones, statistical-counting and repro-duction machines, etc.

#### 35/026 Administrative Work Equipment

Horizontal, vertical, sorting and rotary filing cabinets, planning requisites, in-dexing equipment, horizontal letter-files, copying boards, office furniture.

35/027 Accessories of Administrative Work Equipment

35/028 Punching Clocks



35/029

Dispatching Equipment

#### 35/030 Office and Technical Requisites



35/031

#### 35/031 Dalibor Teleprinter

enables the passing of news recorded on a tape according to new electric principles. The machine permits to receive or transmit by simple current. By means of a change-over switch it can be adapted to transmit or receive by double current, no auxiliary attachment being necessary. Weight: 22 kg. Dimensions: 316×437×230 mm.

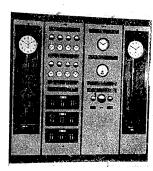
### Automatic Tape Transmitter

This special device ensures a smooth and uniform movement of the punched tape and a transmission speed of 100 Bauds. Size: 120×190×180 mm. KOVO

# CZECHOSLOVAK FOREIGN TRADE

you can learn about the products you have not seen at the exhibitions. The periodical appears three-times a year in six languages and contains information on the export products of all branches of the Czechoslovak industry.

#### 36 ELECTRICAL CLOCKS



36/001

#### 36/001 Large Automatic Clock and Signalling Station VUS-160

for use in large and extensive industrial plants and public clock systems. Up to 1100 other clocks can be connected to this station, which can readily be extended to receive multiples of that number of clocks. Maximum daily deviation ± 12 seconds. Working voltage 24 or 60 V. KOVO

#### 36/002 Automatic Clock and Signalling Station MUS 40

is controlled by Master-Signalling-Clocks HSH-3 with a <sup>3</sup>/<sub>4</sub> second pendulum. It contains various measuring instruments and a fault-signalling equipment. It is suitable for controlling 280 other clocks. Maximum daily deviation ± 0.6 seconds. Working voltage 24 or 60 V.

#### 36/003 Master Signalling Clock HSH-3

suitable for controlling about 50 other clocks. Maximum daily deviation  $\pm$  0,6 seconds. Working voltage 6, 12, 24 V.

#### 36/004 Master Clock HH-1

with a  $^{3}/_{4}$  second pendulum without a signalling device. Up to 50 other clocks can be connected directly to the contact assemblage. Maximum daily deviation  $\pm$  0,6 seconds. Working voltage 6, 12, 24 V. KOVO

#### 36/005 Signalling Clock SH-1

#### 36/006 Precision Master Clock HH-3

with one-second pendulum made of invar with thermal compensation; intended for offices, industries, research laboratories, radio, etc. Maximum daily deviation  $\pm$  0,12 seconds. Working voltage 24 V. KOVO

#### 36/007 Frequency Meter MF

for measuring the frequency of alternating-currents of 50 c/s in power stations, etc. Input of the F. H. P. motor abt. 5 W. Voltage 120 or 220 V A. C. KOVO

36/008



#### 36/008 Single-face Auxiliary Clock PJ 30

for installation in indoor localities, offices, shops, etc. Working voltage 6, 12, 24 or 60 V. KOVO

#### 36/009 Double-face Auxiliary Clock PD 40

Application and working voltage as under item 36/008.

#### 36/010 Double-face Auxiliary Clock PDK 60

for use in yards, streets, platforms of railway stations; mounted sideways to the wall. Working voltage 6, 12, 24 or KOVO

#### 36/011 Tower Clock B 2 e

with an automatic electric winding arrangement; striking full and half-hours. Maximum daily deviation ± 0,6 KOVO

#### 36/012 Shift Control Clock DK-3

the hands of which are advanced by the passage of polarized current impulses sent out every minute by a master-clock or clock station; this is a reliable device for checking precisely the working hours. Working voltage 6, 12, 24 or 60 V.

#### 36/013 Hockey Measuring Set LH

for measuring the net time of an ice hockey match and for signalling goals on ice hockey play grounds.

#### 36/014 Volley-Ball Measuring Set BS

for measuring the net time and signalling the last three minutes of the match, as well as for measuring the rest times.

#### 36/015 Electrical Stop Clock RS-30

for rough measurements of time intervals (up to 30 minutes) in testing stations, shops, laboratories and radio studios. Accuracy of timings 0.3 seconds. Motor input 2,5 V. KOVO

#### 36/016 Electrical Car Clocks AH

for mounting into panels of motor vehicles. They are provided with an anchor movement and electromagnetic battery drive. Visible diameter of the face 2—9/16" (65 mm). Supply voltage of the electromagnet 6, 12, 24 V.



36/013 36/018



#### 36/017 Clockworks for Recording Instruments

RPM-93, RPM-171, RP-46, RP-120

provided for continuous recording of the individual measurements. KOVO

Pigeon Clock RHP

for recording the times of arrival of messenger pigeons.

#### 36/019 Tower Clock Gear

Improved operation; precision self-compensating pendulum. Guarantee of correct operation.

#### CLOCKS AND ALARM-CLOKS 37







#### 37/001 Clocks and Alarm-Clocks

Various kinds of alarm-clocks, such as B-90 type alarm-clocks, miniature type alarm-clocks, style and travelling alarm-clocks, etc.

#### 37/051 Clocks

2692

Standard or striking kitchen wall-clocks, wall and mantle-piece clocks, striking clocks, etc.

#### 37/101 Automobile Clocks for Scooters

37/111 SP 57 Switch for Washers

#### 37/112 Automatic Switch 57

for ROMO automatic washing machines.

#### 37/131 Metronom - A Music-Master's Requisite

#### 37/141 Toys

All kinds of mechanical moving toys.

### RZF and RZK Time Relays

for the protection of power installations. KOVO

#### MOTOR CARS 38

#### 38/001 škoda 440 Export

Passenger car of lighter type; carrying capacity 350 kg or 770 lbs; fuel consumption 7 to 8 lt./100 km or 40.4 to 55.3 m.l.g.; travelling speed, level road 110 km.p.h. or 68 m.p.h.; four stroke, water cooled petrol engine; swept volume 1089 c. c. or 66.43 cu. in power output 40 HP at 4200 RPM; battery ignition, 12 V. Overall dimensions: length 4065 mm or 15'4"; width 1600 mm or 5'3"; height 1430 mm or 48".

#### 38/002 Škoda 440 Chassis

(for passenger car)

MOTOKOV

#### 38/003 Škoda 1201 Ambulance

Powered with a water cooled, four stroke, four cylinder OHV petrol engine; swept volume 1221 c. c. or 74.48 cu. in.; engine front mounted; rear axle drive; fully enclosed, all metal body. Power output 45 HP. Peak speed 100 km or 62.1 m.p. h.

100 km or 62.1 m. p. h.

For transport of patients in a special compartment, separated from the driver; front compartment accommodates two persons, driver included; patient compartment with two stretchers and one seat. Overall length 4620 mm, 15 ft 2 in. Overal width 1690 mm, 5 ft. 6½ in. Overall height 1600 mm, 5 ft. 5½ in. Overall height 1600 mm, 5 ft. 5 in. Curb weight 1220 kg, 2690 lbs. Permissible 10 ad 330 kg, 727 lbs.

MOTOKOV

#### 38/004 All Purpose (Station Wagon)

All Purpose (Station Wagon)

For transport of a maximum of five passengers and light cargos; loading area can be increased by folding down rear seats, thus ensuring accommodation of two passengers including driver and 500 kg or 1100 lbs payload. Overall length 4360 mm, 14 ft. 53/6 in. Overall width 1690 mm, 5 ft. 61/6 in. Overall height 1650 mm, 5 ft. 5 in. Curb weight 1120 kg, 2690 lbs. Permissible cargo 650 kg, 1433 lbs.

MOTOKOV



38/001

#### 38/005 Delivery Van

Delivery Van
For transport of two passengers including driver and 500 kg or 1100 lbs payload in special compartment. Overall length 4360 mm, 14 ft. 3% in. Overall width 1690 mm, 14 ft. 5% in. Overall height 1650 mm, 5 ft. 5 in. Curl weight 1100 kg, 2425 lbs. Permissible cargo 650 kg, 1433 lbs.

MOTOKOV



38/006

#### 38/006 Škoda 1201 (Sedan)

Skoda 1201 (Sedan)

Passenger car, four to five seater; fuel consumption 7.5 t, 9 t/100 km or 57.7 to 35.5 m. p. 1. 9., speed 115 to 120 km. p. h. or 71 to 74.6 m. p. h.; four stroke, p. h. or 71 to 74.6 m. p. h.; four stroke, p. h. or 21 to 74.6 m. p. h.; four stroke, p. h. or 74.48 cu. in.; power output 45 HF at 4200 RPM; battery output 45 HF at 4200 RPM; battery ignition, 12 V. Overall dimensions: length 4500 mm or 199"; width 1690 mm or 5'61/2"; height 1520 mm or 5'.

MOTOKOV

#### 38/007 Skoda 450 Roadster-Convertible

A new type of sports car; fuel consumption 8.5 to 9 lt/100 km. or 33.2 to 51.4 m. p. 1. g.; speed 130 km. p. h. or 80.8 m. p. h.; four stroke, water cooled petrol engine; swept volume 189 c. c. or 66.43 cu. in.; power output 50 HP at 5200 RPM; battery ignition, 12 V. MOTOKOV

#### 38/008 Tatra 603

Passenger car, six seater; fuel consumption 12—14 lt./100 km. or 25.5 m. p. l. g.; peak speed 160 km. p. h. rous stroke, air cooled, rear mounted petrol engine; swept volume 2545 c. c. or 155.245 cu. in; power output 100 HP at 5000 RPM; four forward speeds synchro-mesh; tyres 6.50×15"; battery ignition, 12 V; curb weight 1478 kg or 3240 lbs.

#### 38/009 Škoda 445

4CM ditte

Škoda 440 passenger car powered with engine of 1221 c. c. or 74.48 cu. in.



38/007



swept volume; carrying capacity 550 kg or 770 lbs; fuel consumption 8,2 lt./ 100 km. or 35.7 m. p. I. g. peak speed, level road: 115 km p. h. or 71.2 m. p. h; four stroke, water cooled petrol engine; power output 45 HP at 4200 RPM; battery ignition, 12 V. MOTOKOV

## The SKODA and TATRA

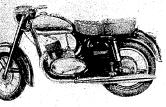
automobiles have numerous advantages on which you will be informed by the CZECHOSLOVAK MOTOR REVIEW, Praha I, ul. 28. října 13.

### MOTORCYCLES, MO-PEDS, SCOOTERS, BICYCLES 39

#### 39/001 Jawa-ČZ 125 c. c. (7.625 cu. in.) Motorcycle

Motorcycle

Model 355; two stroke, single cylinder; power output 5.5 HP at 4750 RPM; peak speed 80 km. p. h. or 49.7 m. p. h.; fuel consumption 2 lt./100 km. or 141 m. p. 1. g. at a speed of 50 km. or 31.1 m. p. h.; four-speed gearbox; automatic starting and gear shifting by means of a single common lever; swinging rear fork.



39/003

#### 39/002 Jawa-ČZ 175 c. c. (10.675 cu. in.) Motorcycle

Model 356; two stroke, single cylinder; power output 8 HP at 4750 RPM; peak speed 90 km.p.h. or 55.9 m.p.h.; fuel consumption 2.3 lt./100 km. or 122.6 m.p. I. g. at a speed of 50 km. or 31.1 m.p. h.; four speed gearbox; automatic starting and gear shifting by means of a single common lever; swinging rear fork.

#### 39/003 Jawa-ČZ 250 c. c. (15.25 cu. in.) Motorcycle

Model 553/04; two stroke, single cylinder; power output 12 HP at 4750 RPM; peak speed 105 km. p. h. of 65.2 m. p. h.; fuel consumption 5 lt./100 km or 94.2 m. p. l. g. at speed of 50 km or 31.1 m. p. h.; four speed gearbox; starting and gear shifting by means of single common le-



39/002

ver; automatic clutch control; swing-

ver; automatic clutch control, such ing rear fork. Model 353/04; differs from Model 353/05 by front fork of new design with another solution of hydraulic damping; intake silencer made of polyamide; machine fitted with amply dimensioned exhaust silencers of higher efficiency; Bowden cable casings fitted with adjuster screws on handle bars. bars.

#### 39/004 Jawa-ČZ 350 c. c. (21.35 cu. in.)

Motorcycle Model 354/04; two stroke, twin cylin-Model 354/04; two stroke, twin cylinder; power output 16 HP at 4750 RPM; peak speed 120 km. p. h. or 74.6 m. p. i, fuel consumption 5.25 lt./100 km or 86.76 m. p. I. g. at a speed of 50 km or 31.1 m. p. h.; four speed gearbox; starting and gear shifting by means of a single common lever; automatic clutch control; swinging rear fork.



Model 354/04; differs from Model 354/03 by front fork of new design with another solution of hydraulic suspension damping; intake silencer made of polyamide; machine fitted with amply dimensioned exhaust silencers of higher efficiency; Bowden cables have adjuster screws on hadle bars.

#### **39/005** Jawa-ČZ 500 c. c. (30.5 cu. in.) Motorcycle

Model 15/02: four stroke OHC engine; Model 15/02; four stroke OHC engine; power output 28 HP at 5500 RPM; peak speed 140 km. p. h. or 87 m. p. h.; fuel consumption 4 lt./100 km. or 70.6 m. p. l. g. at a speed of 60 km. or 37.3 m. p. h.; four speed gearbox; automatic clutch control; front fork with hydraulic suspension dampers; rear telescopic springing.

#### 39/006 Sectional Views of Motorcycles in Motion

ČZ 125 Competition Motorcycle

Model 355, competition design; power output 6.5 HP at 5100 RPM; peak speed 85 km. p. h. or 52.8 m. p. h. MOTOKOV

#### 39/008

**ČZ** 175 Competition Motorcycle

ČZ 175 Competition Motorcycae Model 356, competition design; power output 10.5 HP at 5250 RPM; peak speed 105 km. p. h. or 65.2 m. p. h. MOTOKOV

#### 39/009

Jawa 250 c. c. (15.25 cu. in.)

Gama 200 c. c. (15.25 cu. in.)

Competition Motorcycle

Model 553, special design ("Six Days
Trial"); power output 14 HP at 4750

RPM; peak speed 120 km. p. h. or 74.6

m. p. h. MOTOKOV

#### 39/010

Jawa 350 c. c. (21.35 cu. in.)

Competition Motorcycle
Model 554, special design ("Six Days
Trial"); power output 18 HP at 5000
RPM; peak speci 130 km.p.h. or 80.8
m.p.h.
MOTOKOV

**39/011** ČZ 125 Race Motorcycle

MOTOKOV





39/008



**59/012 ČZ 250 Race Motorcycle**MOTOKOV

39/013 Jawa 350 Race Motorcycle

# CENTRAL COOPERATIVE COUNCIL

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lathes, drilling machines, grinding machines

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cement mixers, asphalt boilers, asphalt spreaders

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grain blowers, hay blowers, ploughs for shallow ploughing, ploughs, hoes

BAKERY MACHINES

BUTCHERS AND SAUSAGE MAKERS MACHINES

TOOLS

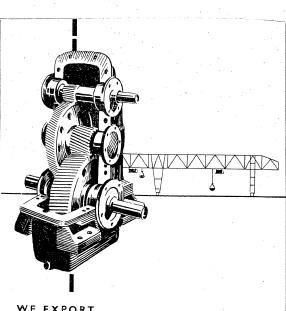
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WE EXPORT

Machines for electric power plants Equipment for metallurgy and mines Equipment for fuel industry Equipment for foundries Gearboxes - bearings Steel constructions Cranes and hoists Conveyors and transport equipment Building and road building machines Machines for mechanics and fine mechanics Machines for glass industry

DEUTSCHER INNEN- UND AUSSENHANDEL

BERLIN W B — M O H R E N S T R A S S E 61

Jawa 500 Race Motorcycle MOTOKOV

39/015 Jawa-ČZ 250 c. c. (15.25 cu. in.) Motorcycle MOTOKOV

**39/016** Jawa-ČZ 350 c. c. (21.35 cu. in.) Motorcycle MOTOKOV

VELOREX Sidecar Model 560 for Jawa-ČZ 250 and Jawa-ČZ 350 Motorcycles

Frame of square section steel beams; wheel sprung and fitted with full-hub brake controlled simultaneously with motorcycle foot brake. Tyre 3.23—16". Body and mudguard of POLYTEX plassific. tic.

#### 39/018 VELOREX Sidecar Model 561 for Jawa-ČZ 500 Motorcycle

Frame of square section steel tubes; wheel sprung and fitted with full-hub brake operated simultaneosly with motorcycle foot brake. Tyre size 3.25—19". Body and wing of POLYTEX plastic.

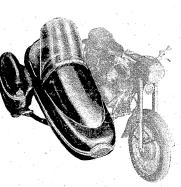
#### 39/019 ČZ 175 c. c. (10.675 cu. in.) Scooter

Scooter

Model 501; two stroke, single cylinder; power output 8 HP at 4750 RPM; peak speed 80 km. p h. or 49.7 m. p. h.; fuel consumption 2 lt./100 km. or 141 m. p. l. g. at a speed of 50 km or 31.1 m. p. h.; welded body of sheet steel; wheels interchangeable; tyres 12" × 3.25"; curb weight of machine 132 kg or 291 lbs. MOTOKOV

#### 39/020

Jawa 50 c. c. (3.05 cu. in.) Mo-Ped Jawa 50 c. c. (3.05 cu. in.) Mo-Ped Model 551; two stroke, single cylinder; power output 1.6 HP at 5000 RPM; two speeds; gear change control mounted on hadle bars; peak speed 45 km. p. h. ro. 28 km. p. h.; tuel consumption 1.6 lt./ 100 km or 1.77 m. p. 1. g. at a speed of 20 km. or 12.4 m. p. h.; both front and rear wheel sprung by means of swinging fork.



39/017



39/019

39/020



#### 39/021 Tube-Type Mo-Ped S2

Type 552 Jawa c. c. or 3.05 cu. in. motorcycle with diagonal cylinder and pedals led out from cylinder block; front wheel sprung by means of swinging arm; both wheels have full-hubbrakes.

MOTOKOV

#### 39/022 PIONÝR-JAWA 50

Model 555: Jawa 50 engine; firm rear wing connected to cowl; central drums and speedometer. MOTOKOV

#### 29/023 ESO 350 MC and ESO 500 MC Cross Country Motorcycles

For cross-country races. Exeptional stress and strain as well as high requirements regarding manoeuvrability and stability called for special development of frame. MOTOKOV

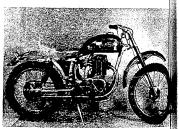
### 39/024 ESO DT 3 Dirt Track Motorcycle 1

Motorcycle Irame of tubular construc-tion; steering head reinforced; engine and two-speed gearbox mounted in chassis of sheet dural. Stroke 82 mm or 3.23", bore 88 mm or 3.46"; swept volume 498.56 c.c. or 40.41 cu. in. Fuel: methylalcohol; power output: 486.6HP; speed: 7500 RPM. MOTOKOV



39/022

39/024



### The JAWA-ČZ

motor-cycles participate in important contests and trials. Extensive reports on these events are to be found in the illustrated periodical CZECHOSLOVAK MOTOR REVIEW, Praha I, ul. 28. října 13.

#### MOTOR BUSES

#### 40/001 Škoda 706 RTO Bus

New model of motor bus powered with four stroke, water cooled, six cylinder diesel engine; swept volume 11,781 c. c. or 718.64 cu. in.; direct fuel injection; power output 170 HP at/1909 RPM; fuel consumption 24 lt./100 km or 11.8 m. p. I. g.; permissible load 5800 kg or 12,786 lbs. Overall dimensions: length 10,840 mm or 35'7"; width 2500 mm or 8'22/5"; height 2980 mm or 9'9".

#### 40/002 Škoda 706 RTO De Luxe Motor Coach

For 35 passengers; all-steel body; comfortable seats; large windows; perfect ventilation and heating. § 706 RTO diesel engine; fuel consumption 24 lt. 100 km or 9.72 m. p. I. g.; peak speed 90 km. p. h. or 55.9 m. p. h.

MOTOKOV

#### 40/003 Škoda 706 RTO Bus, Municipal Model

\$\tilde{S}\$ 706 RTO diesel engine; fuel consumption 27 lt. 100 km or 10.1 m. p. l. g.; speed 65 km. p. h. or 40.4 m. p. h.; pneumatic control of entrance and exit doors; 28 seats: 22 standing accommodations.

#### 40/004 Škoda 706 RTO Motor Coach

Improved chassis model § 706 RO; semi-structural, welded design; tyres 11.00-20 EHD; speed 36 Km. p. h. or 53.45 p. m. h.; designed for  $\frac{44}{MOTOKOV}$  MOTOKOV

#### 40/005 Škoda 706 RTO Chassis

Improved chassis derived from pre-vious ŠKODA 706 RO model; for tech-nical data see Škoda 706 RTO Bus. MOTOKOV



40/001



40/002



anat

#### 41 MOTOR TRUCKS

#### 41/001 Škoda 706 RT Truck

Commercial vehicle with fuel consumption of 25 lt./100 km or 11.3 m.p. l.g.; speed 77 p. h. or 47.85 m.p. h. Gargo platform 5000 × 2245 mm or 16′7′ × 7′4²/«"; height of side panels 500 mm or 20′; permissible cargo 8800 kg or 19,360 lbs. Fuel tank capacity 175 lt. or 38.5 l.g. MOTOKOV

#### 41/002 Škoda 706 RTS Tipper

Commercial vehicle powered with a four stroke, water cooled diesel engine with direct fuel injection; swept volume 11,781 c. c. or 718.64 cu. in.; power output 160 HP at 1900 RPM. Fuel consumption 26.5 lt./100 km. or 10.6 m.p. Single Table Speed 65 km; p.h. or 40 m.p.h.; Cargo platform  $4000 \times 2220$  or  $13'1'1'2' \times 7'3's'$ ; side panel height 450 mm or 18"; permissible cargo 7950 kg or 17,512 lbs; fuel tank capacity 175 lt. or 38.5 l.g. MOTOKOV

#### 41/003 Škoda 706 RT Chassis

Four stroke, water cooled diesel en-Four stroke, water cooled diesel engine with direct fuel injection; swept volume 11,781 c. c. or 718.64 cu. in.; Power output 160 HP at 1900 RPM. Foot operated pressure air brakes for all four wheels; hand operated mechanical brake acting on rear wheels; engine brake. Tyres 11.00—20 EHD; rear tyres dual. MOTOKOV

### N 1 OCH Refrigerator Trailer for T 137 Tug

Serves for brief emergency transport in tow by tractor or truck. Refrigerator volume. 8725×1980×1990 mm or 28'8"×6'6"×6'2"; permissible cargo 10,000 kg or 22.025 lbs; weight of set 23.300 kg or 51.305 lbs; overall length 13.425 mm or 44'.

MOTOKOV









41/003 41/004

41/002



#### 41/005 Tatra 111 S 2

Motor tipper of 10 metric tons or 22,000 lbs capacity; steel tipper platform tipping either side or rearwards. Short wheelbase enables easy manoeuvring in limited space. Tipper platform operated by means of two telescopic ram cylinders. Weight 9460 kg or 20,855 lbs. Carrying capacity 10,000 kg or 22,046 lbs. Peak speed (at 1800 RPM) 61.5 km. p. h. or 38.2 m. p. h. Fuel consumption at a speed of 46 km or 28 m. p. h. 34 lt./100 km. or 8.31 m. p. I. g.

#### 41/006 Tatra 141

High efficiency tractor for transportation of heavy, voluminous cargooes loaded on undercarts, up to 100 metric tons or 220, 460 lbs weight. The cabin is fitted with eight seats and a radio receiver. The tug has a sturdy power winch driven by the vehicle engine and strong coupling devices both front and rear for pulling or pushing heavy trailers. Weight (unloaded) 12.400 kg or 27.336 lbs. Weight (5500 kg or 12.125 lbs cargo and crew included) 18.240 kg or 40.212 lbs. Maximum permissible trailer weight 100.000 kg or 220.460 lbs. Peak speed 37.6 km. p. h. or 25.32 m. p. h. Tatra 111 A.5 engine. Maximum power output 185 HP. High efficiency tractor for transpor-

#### 41/007 Tatra 137

Tatra 137

Modern, fast commercial vehicle of 7.2 metric tons or 15,872 lbs carrying capacity; for road and off-road transport of piece cargos; powered by Tatra 928 engine. Weight 5450 kg or 15,872 lbs. Peak speed 100 km. ph. or 62.1 m. p. h. Average fuel consumption approximately 22 to 24 lt./ 100 km or 12.3 to 11.8 m. p. 1. g. Pull on coupling pin 5800 kg or 12,786 lbs.

#### 41/008 Tatra 137 S 1

Motor tipper with steel tipper plat-form of 5.5 m² or 123.6 cu. ft. capacity; tipping rearwards; for heaviest jobs in building plots, quarries, surface mines etc. Weight 6500 kg or 14,530 lbs;



41/005



41/006







andt. X( )); carrying capacity 7000 kg or 15,432 lbs. Peak speed 90 km. p. h. or 55.9 m. p. h. Maximum tipping period 10 seconds.

#### 41/009 Tatra 138 A

Tatra 135 A
Modern three-axle truck of 12 metric
tons or 26,455 lbs carrying capacity;
powered with Tatra 926 eight cylinder
diesel engine. Engine design similar
to that of model 137; performance
higher. Weight 8000 kg or 17,637 lbs.
Carrying capacity 12,000 kg or 26,455
lbs. Peak speed 72 km. p. h. or 44.74 m
p. h. Pull on trailer coupling hook
10,250 kg or 22,597 lbs. MOTOKOV

### 41/010

#### Tatra 137 NT

Tatra 137 NT
Tug (transport tractor) for towing
two-wheel trailers for transport, refrigerator, furniture moving, passenger
transport, etc. purposes; payload approximately 10 to 15 metric tons or
22,000 to 35,000 lbs. Trailer coupling
pin controlled electro-pneumatically
from driver's cabin. Weight 5550 kg
or 12,255 lbs. Peak speed 90 km. p. h. or 12,235 lbs. Peak speed 90 km. p. h. or 55.9 m. p. h. MOTOKOV

#### 41/011 Praga V 3 S

16

Praga V 3 S

Commercial vehicle for heavy duty service under the most adverse conditions. Carrying capacity: 5000 kg + 5500 kg trailer or 11,023 + 12,125 lbs trailer on roads; 5000 kg + 3100 kg trailer or 6614 + 6834 lbs trailer of froad. Trailer weight can be temporarily increased to 7500 kg or 16,534 lbs. on gradients up to 5% (max. distance 20 km or 12.4 m). Weight 10,650 kg or 23,456 lbs. Three drive axles (front wheel drive controllable); 2×4 forward speeds, 2 reverse. T912 four stroke, air cooled, six cylinder in-line diesel engine; bore 110 mm or 4.33"; stroke 130 mm or 5.12"; total swept volume 7412 c. c. or 452.132 cu. in. MOTOKOV

#### 41/012

#### Praga V 3 S Van

Serves mostly as mobile workshop. Fully enclosed van body. Walls and roof fitted with heat- and noise dead-ening insulation. Ventilation by means of intake air blower. Heating unit







41/011



41/012 41/013



mounted on LH rear side. Electrical equipment 12 V; 220/380 V available. MOTOKOV

### Praga V 3 S Tipper

Praga V 3 S Tipper
For heavy duty earth jobs. Metal tipper
platform of 2.6 m³ or 91,816 cu. ft.
capacity for operation under excavator.
Maximum tipping angle 600 rearwards
within 3 to 10 seconds combined with
automatic control of tailgate ensures
the highest efficiency. Carrying capacity
4650 kg or 9589 lbs; weight 10,430 kg
or 22,995 lbs. The remaining main data
and equipment equal those of V 3 S
Truck.

MOTOKOV

### 41/014

Praga S 5 T

All purpose commercial vehicle. Carrying capacity: 5000 kg + 7500 kg trailer or 11,023 + 16,534 lbs trailer. Weight 9730 kg or 21,450 lbs. T 912 four stroke, air cooled six cylinder in-line diesel engine. Bore 110 mm or 4.33"; stroke 130 mm or 5.12"; swept volume 7142 c. c. or 452,132 cu. in. Maximum power output 100 HP/2100 RPM. Fuel consumption 180 gr/HP h or 6.37 oz. HP/h.

MOTOKOV

#### 41/015

#### Praga S 5 T Tipper

Praga S 5 T Tipper
Tipper platform of resilient construction and 5.25 m² or 114.77 cu. ft. capacity ensures speedy operation. Carrying capacity 4500 kg or 9920 lbs;
Weight 9650 kg or 21,274 lbs. The remaining data equal those of 8 5

MOTOKOV Truck.

#### 41/016

Praga S 5 T Truck For data see S 5 T.

41/017
Praga V 3 S Chassis
Dats equal those of Praga V 3 S Truck
For technical service. MOTOKOV



41/014



41/015

#### 41/018 Škoda 706 RTTS Tug

# Road type for towing two wheel trailers: furniture van, refrigator van, ambulance, mail van and other purpose trailers. Tug is powered with \$706 RTO engine (same as motor coach).

### Škoda 706 RT Truck with RH

Steering MOTOKOV

### The ŠKODA and TATRA

automobiles have numerous advantages on which you will be informed by the CZECHOSLOVAK MOTOR REVIEW, Praha I, ul. 28. října 13.

MOTOKOV

#### SPECIAL CARS



42/001

### **42/001** § 706 ROK-KUKA Dust Bin ${\bf Collector}$

Cabin accommodating 6 persons; automatic control and locking of rear cover by means of pressure air; operated from driver's cabin. Dust bin shaker has o sprung flap ensuring opening of the bin without damage when empited. Capacity 10 cu. metres of loose refuse.

MOTOKOV

# Š 706 AKVMRT Municipal Sprayer

A new model. Technical data indentical to those of SKODA 706 RT Truck.

MOTOKOV



#### 42/004 V 3 S Liquid Refuse Tanker

Mounted on PRAGA V 3 S chassis, serves for pumping and transport of badly contaminated liquids. The vehicle can also operate in off-road terrain with the cargo reduced. Weight 10,650 kg or 25,480 lbs.

MOTOKOV



### SERVICE VEHICLES

43/001 A 3 Trailer

(3 metric tons or 6600 lbs capacity). MOTOKOV

43/002 A 5 Trailer

(5 metric tons or 11,000 lbs capacity). MOTOKOV

43/003

Trailer-Tanker

MOTOKOV

43/002

A 5 Tipper Trailer

(5 metric tons or 11,000 lbs capacity).

MOTOKOV

43/006 DA Trailer

MOTOKOV

43/005

A 10 Trailer
(10 metric tons or 22,000 lbs capacity).

MOTOKOV

43/007 DT 7 Trailer

MOTOKOV

### TRAILERS

44/001

44/002

for passenger cars and motorcycles. MOTOKOV

Service Shop Trailer

Service Shop Trailer

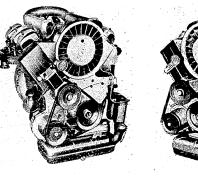
MOTOKOV

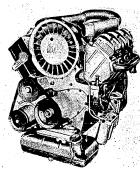
44/003 Service Shop Trailer

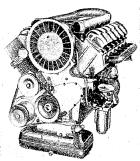
for spark plugs.

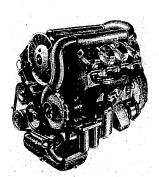
ΜΟΤΟΚΟ̈́

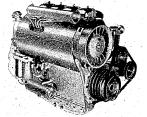
#### 45 TATRA ENGINE RANGE

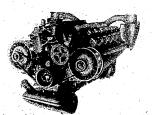












### MOTOR VEHICLE ATTACHMENTS

#### 46/001 Fuel Injection Equipment

PC fuel injection pumps c/w nozzle holders and nozzles of corresponding size; PV fuel injection pumps with speed governors; nozzle holders c/w nozzles; CD fuel transfer pump; fuel filters; nozzle tester. MOTOKOV

46/002 NC Test station

MOTOKOV

46/003 Carburettors

Downdraught, horizontal, vertical; fuel transfer pumps; JIKOV MONOBLOK power carburettors. MOTOKOV

Gauging Table for Carburettor Jets MOTOKOV

46/005 Spark Plugs

Full range of all purpose plugs; heater plugs; spark plugs for racing machines; plugs for power plants; plug production process.

MOTOKOV

46/006 Service Appliance

for testing and adjustment of spark plugs and ignition systems of petrol engines.

MOTOKOV engines.

46/007 **Brake Systems** 

Hydraulic and pressure air brakes; pressure air stop light switch; glass fluid reservoirs; master brake air-pres-sure cylinder and single stage wheel brake cylinder.

#### 46/008 Shock Absorbers

For cars, commercial vehicles, motor-cycles; tester for shock absorbers; telescopic suspension with hydraulic suspension damper for motorcycles, MOTOKOV

46/009 Horns

Electric and pneumatic.

MOTOKOV

46/010 Independent Bus Heaters MOTOKOV

46/011 Sundry Accessories

Sundry Accessories

Speedometers for motorcycles, cars and commercial vehicles; steering wheels for cars and commercial vehicles; switch box for motorcycles; ammeters; temperature gauges; starter motors; windscreen wipers with automatic full travel; wiper drives; wiper blades, RH and LH; junction boxes; fuse boxes; cut-out switches; change over switches; buttons; warning lamps; trafficator swiches; plugs and sockets; pressure switches; commutators; \$ 440 dashboard and T 603 dashboard.

MOTOKOV

Ignition distributors; ignition coils; 6V coils for motorcycles; starter motor, 150 mm or 5.91" dia., with retractable armature; starter motor, 125 mm or 4.92" dia., with retractable drive pinion; regulator coils; flywheel magneto; magnetos for single cylinder and twin cylinder engines; starter-dynamo for motocycles and scooters; rheostat; battery cut-out and change-over switch; heater plug switch; starter dynamo for aircraft motors. MOTOKOV Heater unit for Škoda 440: air cleaner

dynamo for aircraft motors. MOTOKOV
Heater unit for Škoda 440; air cleaner
for Škoda 440; air cleaner for V3S;
T 805; 706; air cleaner for motorcycles
(prefilter with intake silencer). MOTOKOV number plate and tail lamps;
dome lamps; built-in headlamps; motor car headlamps; built-in motorcycle headlamps; trafficator lamps;
fog lamps; inspection lamps; folding
lamps; seat lamps and radiators for
motor vehicles.

MOTOKOV



#### 46/012 Accessories

Jerry-cans: 7, 10 and 15 litres or 1.54, 2.2 and 3.3 I. g. MOTOKOV

### Various Storage Batteries for Motor Cars, Trucks and Motor-

#### 46/015 Magnetic Drain Plug (Magnet

for motor vehicles for draining of crankshaft and differential housing.

#### 46/016 Air Pressure Gauge

for measuring air pressure in tyres. Two types, up to 4 atm. with a short endpiece for passerenger cars and up to 8 atm. with a long end piece for lowerer.

### Mobile High Pressure Greasing

with a flexible, pressure proof armour hose.

### Mobile Auto Jack

length 1300 mm, lifting capacity 3000 kg, lowest position 145 mm, highest 450 mm.

#### 46/019 Oil Filter

consisting of an insert mounted elastically in a strong cylinder closed with

#### 46/020 Lead Batteries (Motor car batteries)

(Motor car batteries.) 5 types 6 V and 5 types 12 V.



46/021

for filling of differential housing and gearboxes. Capacity 30 litres of oil or vaseline for differential housings or gearboxes.

Mobile Oil Filling Apparatus

#### 46/022 Motor Car Lights

for mudguards, parking lights, stop lights, traffic, tail lights.

#### 46/023 Pull Switch

for awitching on of various low yolkage appliances for mouting on the motor car dashboards.

#### 46/024 Chisels of all kinds.

#### 46/025 Clock shaped Air Pressure Gauge

with an end rubber hose for mothers cars from 3,5 to 8 atm. in an atmactive igelite case.

#### BICYCLES 47

### Touring Bicycles (44 Exhibits)

Models: Tp E5; Td E3; Tp 4; Td 4; Tp 5; Td 5; Td 6; Tp 11; Td 11; Tp E9; Td E9; Tp L9.

MOTOKOV

#### 47/002 Sports Bicycles (36 Exhibits)

Models: Sp E6; Sd E7; Sp 8; Sp 18; Sp 16; Sd 17; F5 and F 20.

#### 47/003 Racing and Special Purpose Bicycles (18 Exhibits)

Models: F11; F1; F22; K2; B2; M1; F2 and tandem.



47/001

### 47/004 Baby and Junior Bicycles (48 Exhibits)

(48 Exhibits)

Models: Sp E10; Sd E10; Tp 12; Td 12;

DN 1; PE 2; PE 3; PL 1; PL 2 and labet models: Sp 250; Sp 255; Sd 250.

MOTOKOV

#### BICYCLES SPARE PARTS 48

Spare and Replacement Parts and Accessories for All Types of Bicycles MOTOKOV

#### TRACTORS 49

#### 49/001 Zetor 25 A

All purpose farm tractor; four stroke, All purpose farm tractor; four stroke, win cylinder diesel engine. Swept volume 2.08 litres or 126.88 cu, in; fuel consumption when ploughing approx. 4.5 lt./h or 1 Imp. gall./h. Power output 26 HP at 1800 RPM. Six forward speeds stepped up from 3.7 km. p. h. up to 28.3 km p. h. or from 2.3 m. p. h. up to 17.55 m. p. h.

#### 49/002 Zetor 25 A

All-purpose farm tractor fitted with driver's cabin.

MOTOKOV driver's cabin.

#### 49/003 Zetor 25 A

a can Cu

Fitted with hydraulic power lift and drawbar for two-wheel trailers.

MOTOKOV

#### 49/004 Zetor 25 A

With hydraulic power lift and three point linkage. Hydraulic lift controls mounted ploughs, cultivators, hoes, hillers, etc.

MOTOKOV

#### 49/005 Zetor 25 A

without hydraulic power lift. Fitted with bottom swinging drawbar and air brakes for braking trailers. MOTOKOV

#### 49/006 Zetor 25 A

With hydraulic power lift, lifted tierods and unsprung three position drawbar; suitable for two wheeled trailers.

MOTOKOV

#### 49/007 Zetor 25 A

Without hydraulic power lift. Steel wheels, without electrical equipment.

Tropical design.

MOTOKOV Tropical design.

#### 49/008 Zetor 25 A

With hydraulic power lift and hydraulic overload release for engine clutch which is automatically released when the implement encounters a submerged rock. Three position drawbar serves for coupling trailers. MOTOKOV

#### 49/009 Zetor 25 A

With hydraulic power lift, tyre inflating compressor, hydraulic lock and position drawbar. MOTOKOV

#### 49/010 Zetor 25 A

Without hydraulic power lift, with cab and air brakes for braking trailers. Top drawbar with sprung coupling yoke for trailers and bottom swinging MOTOKOV



49/011---012

#### 49/011-012 Zetor 25 K

Designed mainly for row crop and cultivation jobs. Four stroke twin cylinder diesel engine; power output 24 HP at 1600 RPM. Swept volume 2.08 litres or 126.88 cu. in. Fuel consumption when ploughing 4 lt./h. or 3.52 Imp. quarts/h. Six forward speeds stepped up from 4.0 up to 18.6 km. p. h. or from 2.49 up to 11.55 m. p. h. Two reverses: 2.7 and 6.3 km. p. h. or 1.68 and 3.89 m. p. h. Electrical equipment: 12 V.

#### 49/013 Zetor 25 K

Zetor 25 K
with hydraulic power lift, bottom swinging drawbar and 13.00—28" rear tyres,
Hydraulic power lift controls mounted
Hydraulic power lift controls mounted
ploughs, cultivators, hoers, hillers, etc.
MOTOKOV

#### 49/014 Zetor 25 K

(standard attachments).
Top drawbar with sprung coupling yoke; bottom drawbar; rear wheel tyres 9,00—36".

#### 49/015 Zetor 25 K

Without hydraulic power lift, with swinging drawbar; rear wheel tyres 9.00—36".

#### 49/016 Zetor 25 K

with hydraulic power lift, drawbar for two-wheel trailers and rear wheel tyres 13.00—28".

#### 49/017 Zetor 25 K

with hydraulic power lift, horizontal exhaust, 3-position drawbar for coupling trailers and 13.00—28" rear wheel tyres.

#### 49/018 Zetor-Super

without hydraulic power lift. For tech-nical data see Zetor-Super with hydrau-lic power lift. MOTOKOV

#### 49/019 Zetor-Super

with hydraulic power lift. Wheeled tractor frameless design; four cylinder in-line diesel engine with direct fuel injection; swept volume 4160 c.c. or 255.76 cu in. maximum power output 42 HP at 1500 RPM; maximum permanent power output 38 HP at 1500 RPM. Tyres: front 6.00—20", rear 13.00—28".

#### 49/020 Zetor-Super

with power winch, protective net and short mudguards. Power winch of single-drum type; single speed, overload release, brake and automatic cable winder.

#### 49/021

Zetor-Super **Zetor-Super**without hydraulic power lift. With pressure air brakes and driver's cabin; suitable for road trasport purposes.

MOTOKOV



49/022

#### 49/022 Zetor-Super

with dual rear wheels for rough land service. For MOTOKOV

#### 49/023 Zetor-Super

With front mudguards without speedo-meter. MOTOKOV



#### 49/024 Zetor-Super

with additional weights of 800 kg or 800 kg or 1764 lbs; pull on hook increased to 2000 kg or 4400 lbs.

MOTOKOV



49/025

#### 49/025 Zetor-Super

with power winch and protective net. Single drum power winch has a gearbox with two winding speeds, overload release, brake and automatic cable spooling.

MOTOKOV

49/028



#### 49/026 Zetor Super P

Tracklayer tractor of frameless design for any kind of farm, forest and building industry job.

MOTOKOV



49/027

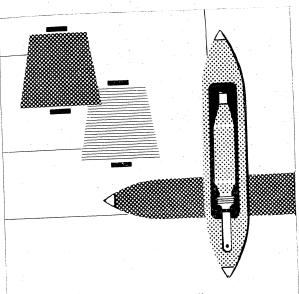
#### **49/027** Zetor Super P

with bulldozer blade. Bulldozer blade is controlled from tractor hydraulic power lift by means of steel cables. Working width of blade 2300 mm or 7'6\*/s"; height 750 mm or 2'5\*/2"; capacity 1 m³ or 35.31 cu. ft. MOTOKOV

#### 49/028 Zetor Super P

with hydraulic power lift and 400 mm tracks. MOTOKOV

# 49/029 Zetor Super Tractor-Sectional View (Wheeled tractor) MOTOKOV



### EQUIPMENT FOR THE TEXTILE INDUSTRY

PREPARATORY MACHINES FOR SPINNING MILLS
SPINNING MACHINES
YARN AND ROPE SPINNING MACHINES
TEXTILE FINISHING MACHINES
MACHINES FOR WEAVING MILLS
KNITTING AND HOSIERY KNITTING MACHINES
INDUSTRIAL SEWING MACHINES
HOUSEHOLD SEWING MACHINES
SHOEMAKING AND LEATHERWORKING MACHINES

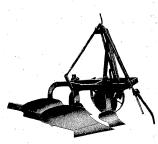
DEUTSCHER INNEN. UND AUSSENHANDEL

MASCHINEN-EXPORT

Declassified in Part - Sanitized Copy Approved for Release 2012/12/12 : CIA-RDP81-01043R001300140004-4

STAT





#### 50/011 50/011 2 PNO-35 Mounted Two Bottom

Reversible Plough Designed for medium and deep plough-Designed for medium and deep ploughing for use with Zetor Super tractor on small and medium size sloping grounds, also for one-sided ploughing in level ground. Share cut 35 cm or 138", overall working width 70 cm or 27.6", maximum working depth 27 cm or 10.6". Weight approximately 450 kg or 903 lbs.



#### 3 PDN-35 Mounted Three Disc Plough

Plough
Working depth adjustable from 12 up
to 22 cm or from 4.72 up to 8.66".
With discs set at maximum angle and
maximum working depth of 22 cm or
8.66" the cut per one disc is 35 cm or
14", overall working width 105 cm or
3'5", Weight 440 kg or 970 lbs.

MOTOKOV

#### 50/013 2 PDN-35 Mounted Two Disc Plough

Ploughing depth variable from 12 up to 22 cm or from 4.72 up to 8.66", working width depends on cutting depth and setting of cutting angle. With discs set to maximum angle and With discs set to maximum angle and at maximum working depth of 22 cm or 8.66", the cut per disc is 35 cm or 13.8"; overall working width 70 cm or 27.6". Weight 367 kg or 809 lbs.

MOTOKOV

#### 50/014 UPS All Purpose Forecarriage

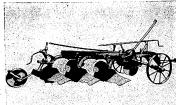
Basic component part of the Mars trail-Basic component part of the water than glough range; carries depth control and lowering mechanism. Weight c/w attachments 190 kg or 418 lbs.

MOTOKOV

### U 22 Two Bottom Attachment

For use with the UPS forecarriage; for ror use with the OFS iorecarriage; for deep ploughing up to a maximum depth of 28 cm or 11"; overall working width 60 cm or 23.6". Weight of bare attachment c/w accessories: 225 kg or 496 lbs.

MOTOKOV



45-065 50/016

### U 322 Three Bottom Attachment

To be used together with the UPS forecarriage for deep ploughing to a maximum depth of 26 cm or 10.2"; overall working width 90 cm or 35.4". Weight c/w accessories:  $345~{\rm kg}$  or  $760~{\rm lbs}$ .

#### 50/017 U 327 Three Bottom Attachment

Serves together with the UPS forecar-riage for medium deep ploughing to a maximum depth of 22 cm or 8.66", overall working width 75 cm or 29.5". Weight of attachment c/w accessories: 280 kg or 617 lbs. MOTOKOV

#### 50/018 U 51 Five Bottom Attachment

Serves together with the UPS forecarriage for skimming of stubble and to a maximum depth of 15 cm or 6"; overall working width 125 cm or 49.2". Weight of attachment c/w accessories: 245 kg or 540 lbs.

MOTOKOV

#### 50/019 UK 153 Cultivator Attachment

Serves together with the UPS fore-carriage for preparing seed beds up to a maximum depth of 12 cm or 4.72"; overall working width 210 cm or 6'10.7". Weight of attachment 174 kg or 383 lbs. MOTOKOV



50/020

#### KPN 6 A Mounted Beet Hoer

RPN 6 A Mounted Beet Heer
For hoeing of row crops spaced from
38 up to 80 cm or from 15 up to
31.5". At normal setting of hoeing
assemblies the hoer operates as a sixrow type. Overall width 320 cm or
10'6"; weight c/w hoeing assemblies,
accessories and signers approximately
571 kg or 1259 lbs.

MOTOKOV 571 kg or 1259 lbs.

#### 50/021 HMD/2 Single Bottom Animal Traction Plough

Working width 22 cm or 8.66"; cutting depth 6 to 14 cm or 2.36 to 5.51". Weight 24 kg or 53 lbs. MOTOKOV

#### 50/022 HML/2 Single Bottom Animal Traction Plough

With one handle and RH slide. Working width 22 cm or 8.66"; maximum cutting depth 6 to 14 cm or 2.36 to 5.51". Weight 30 kg or 66 lbs.

MOTOKOV

TP/100 Single Bottom Animal Traction Plough

Working width 17 cm or 6.69"; cutting depth 5 to 13 cm or 2 to 5"; weight 12 kg or 26 lbs.

#### 50/024 SP 6 LSt Single Bottom Animal Traction Plough

With land wheel. Working width 23 cm or 9"; cutting depth 9 to 17 cm or 31/2 to 63/4". Weight 40 kg or 88 lbs.

#### 50/025 SP 7 LSt Single Bottom Animal Traction Plough

Light type; working width 25 cm or 10"; cutting depth 9 to 23 cm or 51/2 to 9"; weight 46 kg or 95 lbs.

#### SP 9 R Single Bottom Animal Traction Plough

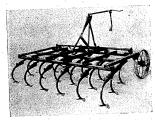
With plough share. Working width 30 cm or 12"; cutting depth 10 to 23 cm or 4 to 9"; weight 61 kg or 134 lbs.

#### 50/027 OPKSO St Single Bottom Animal Traction Plough

Reversible, with 5/6 NR forecarriage with. Working width 21 cm or 8.3"; cutting depth 6 to 15 cm or 2.36 to 6"; weight 65 kg or 143 lbs. MOTOKOV

#### 50/028 OPKSO St Single Bottom Animal Traction Plough

Reversible, with land wheel. Working width 21 cm or 8.3"; cutting depth 6 to 15 cm or 2.36 to 6"; weight 41 kg or 90 lbs.



50/029

#### 50/029 KHN 280 Mounted Cultivator for Depth Loosening

The frame carries 19 clamps with tools. Maximum cutting depth 25 cm or 8"; pitch 15 cm or 6". Overall width and working width 280 cm or 9'3". Weight c/w implements approximately 529 kg or 1166 lbs.

#### 50/030 KN 170 P Mounted Cultivator

17 working tools attached in three rows in welded on yokes. Point pitch 15 cm or 6". Maximum cutting depth 12 cm or 5"; working width 255 cm or 8"4"; weight 300 kg or 660 lbs. Output at 6 km. p. h. or 3.73 m. p. h.: 0.6 ha/h or 1½ ac./h.

### KHZ 200 Trailing Cultivator

Working width 200 cm or 6'7"; maximum cutting depth 30 cm or 12"; 9 shovels. Weight approximately 750 kg or 1653 lbs. The machine is designed for depth loosening; it has various working tools. Working speed 5 km or 3.11 m. p. h. MOTOKOV

#### 50/032 **KPZ** 260 Trailing Cultivator

Designed for preparing of level seed beds up to a resistance of 0.7 kg/cm² or 10 psi. Working width 262 cm or 87"; working depth maximum 15 cm or 6"; weight 550 kg or 1212 lbs; operation speed 3.5 km or 2.17 m. p. h; output 0.85 ha/h or 2 ac./h at a speed of 5.5 km or 2 m. p. h. MOTOKOV

#### 50/033 17-SVBP-105 Animal Traction Corn Drill

Roller system with bottom and top sowing set. The top sowing set serves sowing set. The top sowing set serves for sowing voluminous seeds with delicate husks. Track width 200 cm or 6'7"; working width 178.5 cm or 5'10'4'. Number of rows 17; row pitch 10.5 cm or 4.13"; weight 408 kg or 899 lbs. Output 0.83 ha/h or 2 ac/h at a speed of 5 km or 3.11 m. p. h.

MOTOKOV

#### 50/034 UNIKUM 16-SLN-150 Mounted Spoon Drill

Spoon Drill

Suitable for sowing cereals and other field crops similar to cereals due to seed size and sowing standards. Woring width 240 cm or 7'10½"; row pitch 15 cm or 6"; filling capacity 150 dm³ or 91.5 cu. in. Transport speed 15 km or 9.32 m. p. h. Maximum output at a speed of 8 km or 5 m. p. h.; 1.90 ha/h or 4.69 ac./h. Weight 470 kg or 1036 lbs.

MOTOKOV



50/035

### All Purpose Corn Drill 35-SVBZ-75

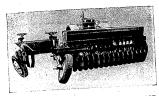
50/035

Roller sowing system with bottom and top sowing set, enabling thick row sowing. Tread width of machine 300 cm or 9'10"; working width 262.5 cm or 8'8"; number of rows 35; row pitch 7.5 cm or 2.95"; weight 730 kg or 1499 lbs. Output 1.30 ha/h or 3.2 ac./h at a speed of 5 km or 3.11 m. p. h.

MOTOKOV

#### 50/036 PDP 120 Semi-Mounted Disc Skimmer

Skims soil to a depth of 8 to 12 cm or 3 to 5", sowing simultaneously stubble-field crops. Working width 120 cm or 3'11"; disc diameter 50 cm



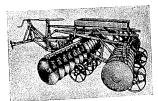
or 20"; 9 discs 18 cm or 7" pitch. Weight approximately 550 kg or 1212 lbs; output I ha/h or 2½ ac./h.

#### 50/037 PPTZ-250 Trailing Disc Skim Plough

Plough

For skimming stubble land after cereals, legumens, oil plants, etc. to a depth of 5 to 8 cm or 2 to 3". Has 17 discs of 50 cm or 20" diameter; 18 cm or 7" pitch. Working width 250 cm or 8/2"; weight c/w sowing set approximately 1265 kg or 2789 lbs.

MOTOKOV



50/038 NTB 28 N Tractor Dise Harrows

Crush clods, skim stubble land, cut meadow turf, etc. Number of discs 28; Disc diameter 45 cm or 17.7"; overall working width 224 cm or 7'4"; weight 506 kg or 1115 lbs. Output approximately 1.1 ha/h or 2½ ac./h at a speed of 5 km or 3.11 m. p. h. MOTOKOV

### TDBT 5A Tractor Tine Harrows

Designed for preparation of soil for seed beds, burial of growth, soil loosening, surface levelling, weed control, etc. Working width 480 cm or 15'9'; number of tines 100; tine spacing



4.8 cm or 1.9". Weight approximately 240 kg or 530 lbs. Output approximately 2.4 ha/h or 6 ac./h at a speed of 5 km or 3.11 m. p. h. MOTOKOV

### 2 SZ 210 P Fodder Rake (Piler)

2 SZ 210 P Fodder Rake (Piler)
Tractor-trailed, for piling or turning fodder. Working width of one part 210 cm or 6'11"; of both V-connected parts when piling: 520 to 600 cm or 17'1" to 19'8". When reverse-operating the drum, the machine turns the fodder, loosens it and airs it for faster drying. Weight of one part 495 kg or 1091 lbs. Working speed 7 to 8 km or 4 to 5 m. p. h.; output 2.4 ha/h or 6 ac/h.

#### 50/041 NOVITAS Fertilizer Spreader

RPZ 300

Suitable for any type of tractor fitted with drawbar or tow hook. Working width 500 cm or 910"; filling capacity 144 dm³ or 8587 cu. in.; weight 260 kg or 572 lbs. Output 1.8 ha/h or 3.45 ac/h at a speed of 6 km or 3.73 m. p. h. MOTOKOV

#### 50/043 VRN 3 Mounted Beet Digger

Digs three rows of beet by means of two LH and one RH point. Variable row spacing from 40 up to 50 cm or from 16 up to 20", working width 3 rows. Overall width of machine 170 cm or 5'7"; weight approximately 200 kg or 440 lbs. MOTOKOV

### VRZ 3 Trailing Beet Digger

It is the VRN 3 mounted beet digger attached to the trailing forecarriage for mounted implements ZPN. Working width 3 rows. Weight: 440 kg or 970 lbs.



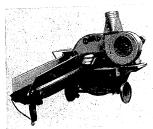
50/050

50/048

50/049

#### 50/045 SK 4 Four Row Tractor Potato Planter

Designed for row planting of any kind of potatoes, provided the bulb weight does not exceed 120 gr. or 4.24 oz. Spacing 62.5 cm or 26.37". Working width 250 cm or 82"; planting depth 14 to 16 cm or 5½ to 6"; filling capacity 2×120 kg or 2× 264 lbs; weight 950 kg or 2095 lbs.



Ensilage Cutter, Type RVM 37,

Ensilage Cutter, Type KV 42,

used for chopping dry or fresh fodder.
Motor input; 5.5 kW, Speed 300 r. p. m.
Output: 14 q of dry fodder, 40 q of
fresh fodder per hour. MOTOKOV

used for cutting dry or fresh fodder including straw behind the MA 90 thresher. Motor input 12 kW, Speed 500 r. p. m. Output: 40-60 q of dry fodder, 120-200 q fresh fodder with chopped straw, 20 mm long.

MOTOKOV

50/046

#### 50/048 Rotary Cutter, Type KRM,

used for chopping dry or fresh fodder and straw behind smaller threshers. Output: 20 q of dry fodder per hour. MOTOKOV

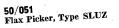


### 50/049 Flax Pulling Machine, Type TLZ 120

The machine pulls and deposits flax. It is used with tractors up to 25 H. P., weight 925 kg or 2035 lb., provided with P. T. O. Output: 3—4 hectares per hours.

### Flax Picker with Sheller and Binding Attachment, Type SLOZ,

designed for picking, shelling and binding dry flax, pulled by the flax puller, hitched to the tractor. Also suitable for flax threshing in the field or barn. Output: 4-5 hectares per 8 hours. 8 hours.



The machine which is hitched to the tractor, picks and binds flax into bundles for further processing. Daily output: 2-3 hectares, Weight: 470 kg. MOTOKOV



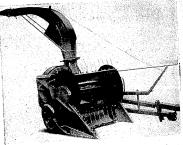
#### Three-Stroke Milking Apparatus, Type DT 1

By removing a part the machine can be quickly converted into a two-stroke type. The third, rest stroke has a favourable influence on the health of the milk-cows. Weight: 10 kg. Capacity of can 18 litres. can 18 litres.

#### Forage Harvester, Type SKZ 42 50/054

The machine serves for harvesting fresh forage including sunflowers and maize up to a height of 330 cm, as well as dry forage and straw left. Output: 150 to 250 q per hour according to the kind of fresh forage. 0.6 hectare of dry forage or straw per hour. Working width 130 cm. Weight 1300 kg.

MOTOKOV



50/054

#### 50/055 Food Mixer, Type MJK - 300,

designed for perfect mixing of all kinds of food. Output: 20 q per hour. Input of electric motor: 4 kW.

#### 50/056 Potato Grader, Type TB 10

The machine divides potatoes into four grades according to their size. Weight 800 kg. Speed of electric motor (N = 1.85 kW) 1400 r. p. m. Approximate output 20 q per hour.



231

50/047

#### 50/057 "ČERT" Potato Spinner

The spinner is an animal drawn, singlerow machine. Number of revolutions of the spinning wheel at a speed of 4 kilometres per hour 87/min. Weight 280 kg. Output per 10 hours: 2 hectares. MOTOKOV

#### 50/059 Semi-Mounted Mower with Adjustable Pitch, Type ZT 183.1

The tractor semi-mounted right-hand cutter bar is flexibly hinged to the frame. Working width 183 cm. Maximum travelling speed during operation 6 km per hour. Weight 210 kg. Output 1 hectare per hour. MOTOKOV

#### 50/060 Side-Mounted-Tractor Mower Z 25

designed for moving grass, working width 152—183 cm. Weight approx. 80 kg. MOTOKOV

#### 50/061 Tractor Grain Binder, Type ŽVZ 210

The machine is intended for grain cutting and binding. Cutting width 210 cm. Working speed 7 km/hour. Weight 850 kg. Output 1.5 hectare per hour. MOTOKOV

#### 50/063 Sugar Beet Harvester, Type SKŘ 1

A single-row beet cropper. It cuts the beet leaves first and then digs the heads. The leaves and heads are conveyed independently into the bins. Output per 8 hours 0.8 hectare. Working speed 2.8 to 3.2 km per hour.

MOTOKOV

#### 50/064 Double-Row Potato Spinner, Type 2-VBZ

The machine works behind 25 or 30 H.P. tractors. It is used for spinning po-

tatoes, machine planted in 2 rows with an inter-row spacing of 70 cm. Working width 140 cm. Weight 650 kg. Output 0.45 hectare per hour. MOTOKOV



50/064

#### 50/065 MOTOROBOT Garden Tractor, Type PF 61

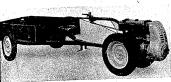
The machine is a small two-wheel tractor which finds a wide range of application in gardens, vegetable gardens, nurseries, orchards, parks, etc. in combination with suitable implements. Speeds 3 forward (3.5—4.5—8 km/hr.) reverse (3.5 km/hr.) Output 5 HP. Weight 350 kg. MOTOKOV



50/065---06

#### 50/066 Rotary Cultivator, Type F 651

for use with PF 6 Motorobot, for soil loosening and tillage, especially suitable for vegetable gardens and orchards. Working depth 600 mm, or 400 mm in hard soil. Weight 109 kg. MOTOKOV



50/067

#### 50/067 Farm Wagon, Type PV 81

A double-wheel PF 6 Motorobot trailer, used for handling a variety of hauling jobs. Load carrying capacity 800 kg, 210×135 cm. MOTOKOV

#### 50/068 Riding Attachment, Type PP 23

the riding attachment serves for transport purposes and operation with implements requiring no attention (harrows, etc.). Weight 72 kg.

#### 50/069 Cambridge Roller, Type VCM-125

This Motorobot hitched implement serves for breaking up the soil crust. Weight 485 kg. MOTOKOV

#### 50/070 Plain Roller WH

The roller which is attached to the PF-61 Motorobot hitch, prepares seed beds and breaks up clods. Weight MOTOKOV 175 kg. 50/071



#### 50/071 Mower, Type Z 151

for use with PF-6 Motorbot, serves for grass cutting. Working width 152 cm. Weight 110 kg. It operates at a Motorobot reverse speed of 3.5 kilometres per hour. MOTOKOV

#### 50/072 Orchard Plough, Type ZP-130

A single-share, reversible plough, hitched to the Motorobot tractor; it is suitable for ploughing medium heavy soil. Working width 25 cm. Weight of plough 52 kg.

### **50/073**Disc Harrows, Type BDM-100

For use with Motorobot PF-61 tractors. The harrows serve for the preparation of seed beds and turning of stubble fields. Working width 100 cm. Weight 94 kg. MOTOKOV

#### **50/074** Všerob 3-DHK Multi-Purpose Cultivator

A Motorobot PF-61 hitched implement for soil preparation and cultivation. Suitable for potato, beet or vegetable crops. Weight complete 138 kg. MOTOKOV

#### 50/075 Cultivator, Type KM-64

Hitched to Motorobot PF-61 tractor for soil loosening. Maximum working depth 9 cm. Working width 64 cm. Weight 40 kg. MOTOKOV

#### 50/076 Inter-Row Cultivator, Type KRM-116

This PF-61 Motorbot hitched implement is used for weed control and soil aeration. Working width 116 cm. Maximum working depth 120 cm. Weight 40 kg. MOTOKOV

#### 50/077 Belt Pulley, Type N-12

This special attachment to PF-61 Motorobot tractors, is used for driving agricultural machines.

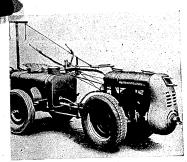
#### 50/078 Post Hole Digger, Type VLM

This PF-6 Motorbot semi-mounted implement is used for digging holes for setting trees and bushes. Diameter of holes 28 cm. Maximum digging depth 30 cm. Weight 60 kg. MOTOKOV

#### 50/079 Post Hole Digger, Type VM

This semi-mounted implement for PF-6 Motorobots serves for drilling perpendicular and diagonal holes, 30 or 45 cm in dia, to a depth of 70 cm. Diameter of holes 30 or 45 cm. Maximum digging depth 70 cm. Weight 340 kg.

MOTOKOV



1100

50/080

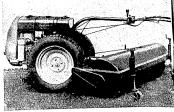
#### 50/080 Spraying Attachment, **Type PM-200**

This PF-6 Motorbot attachment serves This PF-6 Motorbot attachment serves for pest control of orchards and vegetable crops. It provides a flat, high spray even for trees. Approximate weight 220 kg. Tank capacity 200 litres. Output 180 to 350 sprayd trees per hour.

MOTOKOV per hour.

#### 50/081 Power Brush, Type ZM-12

This Motorobot implement serves for brushing and sweeping yards, lawns, play grounds, etc. Working width 126.5 cm. Working speed 4 to 5 km//hour. Approximate weight 160 kg.



#### 50/082 Saw Bench, Type PCM-65

The PCM-65 saw bench which is de-The PCM-65 saw bench which is designed for use with PF16 Motorbot tractors, serves for cutting wood. Weight 83 kg. Speed of blade 1900 r.p. m. 2 operators. Approximate output 2 to 4 cu. metres per hour according to the kind of wood. MOTOKOV

#### 50/083 PRIM-152 Reaper

The reaper serves for cutting corn. The cut corn in deposited in bunches in the stubble-field. Length of cutter bar 152 cm. Weight c/w assembly 439 kg. Maximum cutting speed 6 km/hour.

MOTOKOV

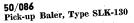
#### 50/084 Thresher, Type MA 90

The thresher is used for threshing all kinds of cereals, legumes and oil plants. The 25 kW, type RFU 92 A electric motor for 380/220 V a. c. develops a speed of 2960 r. p. m. Output 20 q of wheat per hour, of 43.5 p. c. yield and 16 p. c. moisture content. 4 to 5 operators.



### Automatic MAJ-90 Thresher with Clover Shelling Attachment

The thresher is intended for clover threshing, shelling and cleaning. It can also be used for threshing grain and leguminous plants without dismantling the sheller. Weight about 4000 kg. Output 150 kg/hour.



The machine picks up and bales straw or forage in the field which it delivers on slide rails to the trailer. Weight 1400 kg. Output ½ to 1 hectore per hour. are per hour.

#### 50/087 Straw Baler, Type LS-130

The machine presses and bales straw. Length of bales 300 or 500 mm. Output 30 to 35 q per hour. Weight 1025 kg. MOTOKOV

#### 50/089 Grain Blower, Type Z-3-A

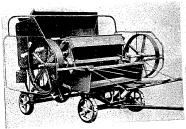
The machine is used for the pneumatic conveying of grain. Approximate weight with kW electric motor and accessories 415 kg. Output at a length of 40 metres and height of 10 metres 50 q per hour. The machine can be easily transported and prepared for use.

### 50/090 TORON Hay Blower

The blower is used for the pneumatic conveyance of stalked plants, such as hay, straw, etc. The S 2/II type can be used with pulley block behind a thresher and the S 2/III with own electric motor types are suitable for use with a thresher. In addition, the S 2/III serves for conveying all kinds of fodder. The output of the machine depends on the speed of the fan. It amounts approximately to 2500 kg per hour.



50/086



50/089

50/090



#### 50/091 Hay Blower, Type VSDP with Feeding and Crushing Attachment

The blower is used for the pneumatic conveyance of stalked plants, such as hay, straw, etc. Output 3000 kg of hay delivered to a distance of 30 metres and a height of 10 metres per hour at a speed of 1220 r. p. m. 380 V, 1500 r. p. m., 9 kW electric motor.

#### 50/092 Two-Wheel Trailer, Type DP 2.5 S

The trailer can be tipped to two sides and to the rear by means of a hydrau-lic telescopic cylinder, fitted to the hy-draulic power lift. The trailer is provided with a hand brake acting on the two wheels, within the driver's reach. Length 440 cm. Carrying capacity 2500 kg. Weight 760 kg. MOTOKOV

#### 50/093 Tractor Trailer 3.5 PVB 2

The spring mounted trailer has a payload of 3.5 tons. It is provided with an air-pressure brake and mechanical hand brake. Carrying capacity  $3500~\mathrm{kg}$ . Weight  $1450~\mathrm{kg}$ .

#### 50/094 Farm Wagon, Type PV 2.5

The animal drawn farm wagon is unsprung and its box is not tiltable. The cargo platform is 180×595 cm in size. Carrying capacity 2.5 tons. Weight 955 kg.

#### 50/095 Manure Loader, Type NH-100-A

The hydraulically controlled loader is hitched to the 225 K tractor. Its tower can be turned by 580°. The forks can be substituted for a shovel. Weight of the loader 800 kg. Working pressure 70 atm. Extension of grab 1000 mm. Capacity 120 to 150 q per hour.

### Mounted Fertilizer Distributor

The machine is designed for use with 15 H. P. tractors. Working width 3 metres. Box capacity 600 kg. The simple frame of the machine can be dismanted.



#### 50/098 Tractor Drawn Sprayer, Type P-900

The machine is used for pest control of field crops and fruit trees. It can also be used for other sanitation purposes. By means of a spraying frame the machine can be adjusted for wide field spraying, or adapted to highpressure hoses for spraying trees and bushes. Piston type pump. Output of pump 40 litres per min. For flat 10 metre spraying, adjustable from 250 to 750 litres per hectare. Weight with liquid 1430 kg.

MOTOKOV

#### 50/099 Logging Truck, Type DT 7

Useful load 7000 kg. Permissible speed 30 km/hour. Permissible overall weight 9420 kg.

MOTOKOV

#### 50/100 Liquid Manure Tank Car, Type FPT-2.5

The trailer is used for the transport of The trailer is used for the transport of thick or thin liquids. It is also suitable for spraying. Compressor capacity 200 cu. metres per hour. Maximum permissible load 5610 kg. LK 70/70 compressor. Capacity of tank 2.5 cu. metres.

MOTOKOV

#### 50/111 Dehydrated Ammonia Spreader

Comports two undercarriages with tanks and ammonia spreading set on cultivator. Tank capacity 535 litres or 117.7 lmp. gallons. Weight 1850 kg or 1078 lbs. 4078 lbs.

#### 50/112 RAG 1 Hand Operated Aerosol Generator

For pest control of vegetation by mist. Weight c/w petrol or aerosol charge 11.7 kg or 25.76 lbs; consumption per hour: 1.5 litre or 1.32 lmp. quart petrol and/or 4.5 litres or 1 lmp. gallon perpendicular or 1 lmp. gallon aerosol.



Esox B 2 Motor Launch Mower

For mowing water plants of every description.

#### 50/115 Rymipol Fodder Mixer

50/113

For mixing of fodder; enables also weighing of individual fodder kinds, washing and de-sprouting of potatoes. 4 metr. q. or 880 ibs fodder prepared within 12 minutes, including weighing of individual fodder kinds and emptying of machine.

#### 50/116 Mobile Scalding Set PK-20

Fully automatic, high efficiency set for potato scalding, mounted on a special undercarriage. Output 1500 to 2000 kg or 3300 to 4400 lbs potatoes per hour. Weight 4200 kg or 9258 lbs.



#### 50/117 Mobile Brass Sprayer No. 3

Serves for liquid mist spraying of vineyards, orchards, etc. on large scale. Extension atrachements enable also height spraying. Capacity 40 letres or 8 g. I. m. p. gallons.

#### 50/118 MTZ 8 Tractor Dung Sprayer

For surface dung spraying and simultaneous hoeing or chiseling of row crops, particularly of beet; especially suitable for cultivation of sugar beet and botato hilling. Working with 3000 mm or 9 ft. 10 in. Operating speed: 4 to 6 km or 2.49 to 5.75 m.p. h. Travelling speed: max. 20 km. or 124 m. p. h. Weight 1600 kg. or 3527 lbs. KOVO

#### 50/122 Husking Machine

For husking dry corn husks. Super-sedes manual corn husking. 3 opera-tors needed. Maximum weight 350 kg or 770 lbs. Drive: electric motor of 4 kWh power output or combustion en-gine of 5 HP power output.



51

#### 50/123 Z 102 Grain Blower

for pneumatic transport of grain and loose material in silos and large farms. Output 12 t/h, weight 460 kg without accessories.



#### 50/124 Z 103 Grain Blower

for pneumatic transport of grain of all kinds for a medium sized farms. Out-put 6 tons per hour. Weight 160 kg.

#### 50/125 OSO-57 Grain Deduster and Aspirator

is a newly designed machine to be used particularly by grain silos. This machine separates completely the dust particles contained in grain and at the same time removes 100% of grain pests. Maximal output  $10.000~{\rm kg/h}$ .

#### 50/131 Mvs Adjustable Motor Reamer

for turning and reaming of main bearings of crankshafts in engine housings.

### Hay Blower

is made of sheet steel. Frame is mountis made of sheet steel. Frame is notincted on a two wheel undercarriage, diameter of pipes 500 mm. Output: 1 ton of fodder in 10—15 min. Weight with the electromotor but without accessories 210 kg.

#### 50/133 Doudo Plough

is a frame, animal drawn two bottom reversible plough with leverage for depth control. Working width 48 cm, depth 6—20 cm, weight 125 kg.

### 50/134 ZP 130 Garden Plough

single bottom reversible plough mounted on PF6 Motorobot. Working width 25 cm, maximal plouhing width 21 cm, weight 52 kg.

#### 50/135 Matador Plough

is a robust, two bottom animal drawn frame plough for all soil kinds and soil conditions. Working width 44 cm, maximal ploughing depth 6—20 cm, weight

#### Are you interested in Czechoslovak products?

### CZECHOSLOVAK FOREIGN TRADE.

a periodical of the Chamber of Commerce of Czechoslovakia, regularly contains reports on traditional export articles as well as novelties of the Czechoslovak industrial production.

## FIRE EXTINGUISHERS AND EQUIPMENT

#### 51/001 Two-wheel Motor Fire Engine **DS** 16

Suitable for major fire brigades in Suitable for major fire brigades in places where water source is inaccessible for four-wheeled fire engines. Maximum pressure 160 m, or 994 ft. Weight 900 kg or 1984 lbs.

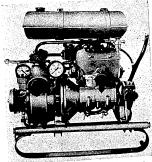
#### 51/002 PP8 Heavy Duty Trailer

for transport of PS 8 portable power fire engine c/w attachments.

MOTOKOV

### 51/003 PPS 8 L Light Trailer

for transport of PS 8 portable motor fire engine c/w accessories. MOTOKOV

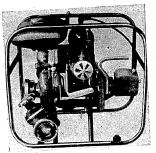


51/004

#### 51/004 PS 8 Power Fire Engine (Portable)

for inaccessible places.

MOTOKOV



51/005

#### 51/005 PS 3 Power Fire Engine (Portable)

for places inaccessible for heavy machines, for impassable spots. Nominal water flow 300 lt./min., 66 Imp. gall./min. Weight 35.+90 kg or 77+198 lbs.

#### 51/006 ZD 18 Two-Wheel Ladder

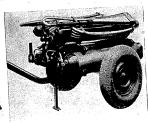
for erection or fire extinguishing purposes. The design ensures reasonable load at full travel.

#### 51/007 VP 200 Foam Fire Extinguisher (Mobile)

for extinguishing of liquid combustibles by means of air-mechanical foam. The device is independent of water sources and suitable for prompt fire extinguishing without any loss of time. Nominal capacity 200 litres, 44 lmp. galls. Volume of generated foam 1600 litres, 352 lmp. galls. Weight of charged device 550 kg or 1212 lbs.

#### 51/008 S $4 \times 25$ Snow Fire Extinguisher (Mobile)

for extinguishing of any kind of inflammable matter, particularly of H. T. electrical equipment. Filling capacity 100 kg, 220 lbs. Gross weight 515 kg, MOTOKOV



51/009 S  $2 \times 25$  Snow Fire Extinguisher (Mobile)

for extinguishing any inflammable matter, particularly of electrical equipment, also H. T. equipment. Filling capacity 50 kg, 110 lbs. Gross weight 203 kg, 447 lbs.

MOTOKOV

#### 51/010S $1 \times 25$ Snow Fire Extinguisher (Mobile)

for extinguishing any inflammable matter, particularly electrical equipment, even H. T. leads. Filling capacity 25 kg, 55 lbs. Gross weight 105 kg.

#### 51/011 SZ 20 Hold All Fire Sprayer

for ensuring fire safety in houses and minor workshops. Filling capacity 20 lt., 4.4 Imp. galls. Gross weight 32 kg, 70.5 lbs. MOTOKOV

#### 51/012 V 10 Water Fire Extinguisher

for any matter likely to be extinguished with water.

MOTOKOV

#### 51/013 P 10 Foam Fire Extinguisher

particularly suitable for liquid combustibles MOTOKOV



51/014
Fire
Extinguisher
PR 6

Powder type, for liquid inflammable materials where water would cause damage. MOTOKOV

51/014

51/015 T1 - 2.5 - 6 Tetrachlore Fire Extinguisher

for liquid and solid combustibles.

MOTOKOV
51/011



51/016 VP 10 Foam-Air Fire Extinguisher

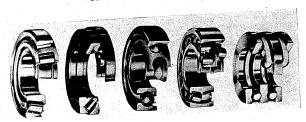
for extiguishing of liquid combustibles by means of air-mechanical foam.

MOTOKOV

51/017 S 1.5 and 6 Snow Fire Extinguisher

Universal extinguisher for any kind of inflammable matter. AOTOKOV

### 52 BEARINGS



#### Roller Bearings

single row, double row radial roller bearings, uni-directional, single row

axial roller bearings, two-directional, double row tapered roller bearings.



# ČECHOFRACHT

SHIPPING CORPORATION

# PRAHA, CZECHOSLOVAKIA

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SHIPBROKERS AND CHARTERING AGENTS REPRESENTATIVES OF LINER COMPANIES SHIPOWNERS AND SHIPOPERATORS

#### KITCHENWARE 53

#### 53/001 Household, Hotel and Other Kitchenware

REAL NORMA enamelware, plain, medium-weight or heavy; decorated, hotel type DOSMA-SN enamelware with reinforced bottom up to 60 cm. in dia. and a capacity of 120 litres.

ELEKTRO-DOSMA enamelware with reinforced bottom, especially adapted to electricrange plates, up to 30 cm in dia.





#### 53/002 Sfinx Iron Kitchenware

cast, enamelled.

(M

53/003

Aluminium Kitchenware
thick, polished or brushed.
Kitchenware with strong bottom, 6 to
10 mm. for electric kitchen ranges.
MOTOKOV

ALUSPOR Cast Aluminium Kitchenware for electric, gas or coal fired morokov





SANDRIK Aluminium Kitchenware with specially reinforced bottom, for hotel kitchens.

MEVA aluminium coffee-pot in modern shapes and with insulated handles.

MOTOKOV

Milkpot (double-plated). The milk is boiled over a water bath. The pot is provided with a steam-whistle. MOTOKOV

SANDRIK restaurant boiling-tub for dumplings. MOTOKOV

Restaurant aluminum pot with drain-MOTOKOV cock.

Aluminium sports requisites, canteens, field bottles, foodboxes. MOTOKOV

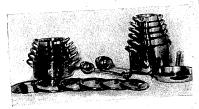
#### 35/UU4 INOXYDABLE Stainless Steel Kitchenware

MOTOKOV

Grater, made of one steel-plate, stainless.

#### 53/005 Galvanized Kitchenware

Washing pots, water buckets, tubs, MOTOKOV



#### HOUSEHOLD KITCHEN MILLS 54

#### Household Kitchen Mills, Kitchen Robot

hand-operated. Meat-mincers, fruit-presses, mills for grinding spices, pop-py seeds, etc., bun graters, bread cut-ters.

Universal grating machine MARS
Dough making machine with rotary
MOTOKOV

Sauce or vegetable strainer, with various perforated bottoms. MOTOKOV

MOTOKOV Turkey coffee-mills.

MOTOKOV

MOTOKOV TRAMP pocket mills.

Coffee-mills BO.

Mills for spices BO - small barrels.
MOTOKOV

Maize grinders.

Kitchen Robot

The machine can be driven from an electric motor.

#### KITCHEN UTENSILS 55

### Tinned Sheet or Wire

Onion slicers, can openers, slicers, tomato cutters, etc. MOTOKOV

Baking forms, forms for pastry, vegetable slicers, egg beaters, dish baskets, etc. Large trays of 5 to 40 litre capacity, for canteens.

243

MOTOKOV

# 56 FLAT-IRONS, COOKERS, LAMPS

Wick petroleum lamps with glass chimney Hurricane lanterns. Brass petroleum cookers, noiseless petroleum cookers and parts. Spirit cookers with cylindrical or round globe and parts. Oil stoves.

## 57 CLEANING REQUISITES

Parquet shavings Fine steel wool. ALORIT wool for washing aluminium kitchenware. Steel wool sponges. Polyamide sponges, multicoloured, for washing plates and dishes. MOTOKOV

### 58 CUTLERY

#### 58/001 Cutlery

Plain steel and corrosion-proof knives. All kinds of butchers' knives. Artisans' knives. Folding knives. Plain or stainless pocket knives, hunting knives, daggers. Knife sharpeners. Stainless saw kniwes for hot pastry or tomatoes. Forged knives for cooks. Tweezers. Razor blades. Scissors and shears, sheep shearing shears. Hacking knives. Twoprong forks for meat. Potato scrapers. Fowl shears. Folding knives.

58/002 Shaving Requisites

All kinds of razor blades. Shavers made of plastics. PRAGOEXPORT

58/005 ALFA Electromagnetic Vibration Shaving Apparatus

Voltage 220/120 V, 6,5 W.





### 59 TABLEWARE

#### 59/001 Table-Sets

Knives, forks and spoons with hollow handles, silver-plated or made of presed or cast aluminium, with ALSA stainless knifeblades. Various silver-plated products for hotels or house-hold.

#### 59/002 Tableware

Trays, vases, liqueur sets, bread crum pans for restaurants or household use in various shapes. MOTOKOV

#### .

#### 59/003 Sundry Tableware

Cocktail-shakers, cocktail strainer, sets of trays for glasses, coffee-mills and coffee-machines, stainless gherkin tongs, stainless trays, boiled egg cutters, percolators, tea cups, stainless ice-cream cups, apple cutters, tea spoons, beer warmers. Corkscrews, can openers, nutcrackers, etc. MOTOKOV

# 60 ELECTRIC HOUSEHOLD APPLIANCES

Single-plate cookers, 145 or 180 mm. in dia., with or without change-over switch, two-plate 038 cookers with tubular plates.

Immersion cookers 181 and 182.

Electric flat-irons with thermostat and moistener, or plain flat-irons with switch.

Ironing press E 200.

Coffee-mill 024 with mixer and egg-

Egg-beater in a glass vessel 433 N.

Double egg-beater.

Five-speed mixer with fruit-separator.

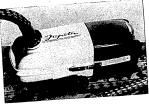
Electric PORKERT kitchen robot ÚKS.

Parquet polishing machine 722.

PEROTA washer.

PEROBOT washer.





Square PEREX washer.

MORETA flow washer.

Linen drier.

Accumulating stoves.

Cushion for invalids.

Hot water tank.

ICM

Hair-drier No. 519.

Single-head shaving machine.

Vibrating shaving machine EM 550.

Double-head shaving machine.

Spare baking plates for electric ranges, 145 or 180 mm. in dia.

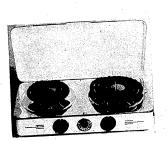
VAŘENKA double-cooker for roasting and stewing.

Electric oven with inspection window. Electric kitchen range T 130.

Electric automatic kitchen range T 131.

MOTOKOV









### 61 HOUSEHOLD AND FOODSTORE REFRIGERATORS

Electric compressor type CALEX reprigerator, capacity: 100 litres.

Electric CALEX refrigerator, capacity: 150 litres.

Electric ELEKTROSVIT absorption refrigerator, capacity: 60 litres.

ELEKTROSVIT household petroleum refrigerator, absorption type, capacity: 60 litres.

SVEZA refrigerating set, 10—200 cal. for refrigerators to 450 litres.

Refrigerating set of CALEX 100 litre compression refrigerator. MOTOKOV

# 62 HOUSEHOLD GAS APPLIANCES



Gas kitchen ranges with thermostat, oven inspection hole, with automatic ignition, etc.

Gas kitchen range with electric oven.

Gas kitchen range 116.

Automatic gas kitchen range.

Plain gas ovens.

Gas ovens with twin gas cooker 611.

Twin gas cooker with MORA 323 grill.

MORA 310 three-burner gas cooker.

Gas frier-cooker 811.

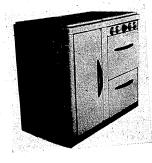
Gas hot water reservoir, capacity:

80 litres.

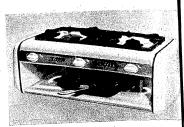
MORA P 5 Gas flow heater.

MORA PO 13, PO 35 gas flow heaters.

Bathroom gas water heater, type MOTOKOV



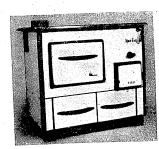








#### COAL FIRED KITCHEN RANGES 63



FAVORIT 123 kitchen range with two baking ovens.

KS 144 combined gas and coal kitchen

MORA 125 coal fired kitchen range.

Coal fired kitchen ranges: LUXOR  $18 \times 33$  cm, LUDO, MEOLUX 45, META.

KABOR kitchen range stove, enamelled. Coal fired kitchen range 502 for farmers, two ovens.

BRUTAR boiler type stove, coal fired. 

### STOVES, COAL FIRED





CLUB I and II, ŽIARA, THERMO 13, PETR 8.

Hot-air stove 687 for large rooms. Fireplace insert 1330.

MOTOKOV MUSGRAVES 8 stove.

#### PERAMBULATORS AND CHILDREN'S 65 CARTS

Quilt, knitted or folding peramulators. Bicycles, tricycles, puppet carts, scooters, children's pedal automobiles.

MOTOKOV

#### 65/002 Perambulators

Deep and sports types of every description.





### MECHANICAL TOYS

SOKOL aeroplane, fastened to an arm, driven by means of a flashlight battery motor.

Horizontal steam boiler, a suitable toy for children up to the age of 10, with accessories: a wind-mill, crane, power hammer, saw and transmission.

Vertical steam-engine with flywheel.

PEROTKA washer for girls up to the age of 14.

Motor car with clock-work. The motor car can move in any desired direction.

Flywheel type motor car, designed to move forwards or reverse.

Cistern. Clock-work drive.

1115

Fire engine with telescopic ladder and hose. Clock-work drive.

Tilting platform truck. Clock-work drive.

Breakdown lorry. Clock-work drive. The lorry moves on straight and solid ground. It is provided with a revolving erane with jib, attached to its silon turntable.

Electric ŠKODA 1200 SEDAN motor car; electric motor drive; remote control.

Ambulance, refer to the preceding item. Clock-work motor car, figure eight circulating type.

Patrol-service boat; solid spirit fired diaphragm boiler.

Racing boat. Clock-work.

ORAVA launch. Most parts are made of silon fibres. The propeller is motor driven.

\*\*PRAGOEXPORT\*\*







### SPORTS GOODS



Square aluminum food-boxes in various sizes. Round aluminum food-boxes with glass lining for butter, jam, boxes, Aluminium canteens. Aluminium chairs, boxes with glass lining for butter, jam, etc. Aluminium canteens. Aluminium fieldbottles. Metal folding chairs. A complete line of fishing tackle. Various types of ski-binding. Ski edges, ski boot fittings, ski sticks.

Skates, children's skates, figure skates, goal keeper's skates Canada, Special, Junior, Rytmus, Stadion, Elán, Mignon, Dasino, Mensor, King Leonidas.

Darling children's skates, Elite 125, Waltz 225, Sport 171 pointed skates, Junior 505 children's icehockey skates, 550 speed skates, Hockey Canada icehockey skates, Rekord 966/1, Zenith 906, Kraso 976 special figure skates, Canada 502 ice-hockey skates, Globus 811 take-off skates, Globus 811 take-off skates, PRAGOEXPORT

### LUMINAIRES FLASHLIGHT BATERIES

69/001

#### 68/001

### Luminaires

# Lighting fittings. Fluorescent tubes for workshops and rooms. Period chande-liers. Operating lights. GLASSEXPORT MOTOKOV

#### 68/002 Film Studio Illumination

# Various designs of lights. Theatre re-flectors. Mine lamps. Industrial out-door lamps. Marine lanterns. MOTOKOV

Pocket-Torches

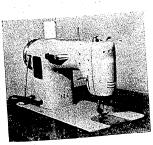
MOTOKOV

69/002 Bicycle Reflectors

Small, large, front and rear reflectors; dynamoes.  $\begin{array}{c} \text{MOTOKOV} \end{array}$ 

#### HOUSEHOLD OR DRESSMAKERS SEWING MACHINES 70 70/002







#### 70/001 Household Sewing Machines

Lada 233, Lada 236 (N I 58) portable, Lada 132 portable, Minerva 122, 123, 124. KOVO

#### 70/002 Dressmakers' Sewing Machines

Minerva 224 single needle sewing machine, Two-needle sewing machine 1246, Single- or two-needle sewing machine 1057 with arm and feder.
Footwear sewing machine 1090 with trimmer. Footwear single-needle sewing machine 1192.

#### METAL TUBING FURNITURE 71

#### 71/001 Household Metal Tubing Furniture

Drawing rooms, folding beds, couches, Drawing rooms, folding beds, couches, chess-board tables, flower stands, radio receiver stands, children's beds, beds, nightstands, chairs, arm-chairs, stools, dining room tables, garden fur-

71/002 School Metal Tubing Furniture Desks, chairs, tables, lecturer's desks, black-boards.

#### 71/003

### Office and Workshop Furniture

Fire-proof cabinets, safes, planning cabinets, various filing cabinets, orgaplans, lockers.

PRAGOEXPORT

MATORON MOTOKOV

Hospital Metal Tubing Furniture

### SCHOOL AND OFFICE REQUISITES

Pencil sharpeners, stapling machines, perforators, numbering machines, letter files, letter stands, paper clips, drawing pins, nibs, etc. Letter balances, letter file mechanism, note book accessories, perforators, drawing-

boards, drawing requisites, pantographs, perspectographs, planimeters, school and technical mathematical instru ments and parts, logarithmic rulers.

PRAGOEXPORT

#### SMALLWARE AND OUTFITTING ARTICLES

Shoe tacks, wooden pegs, heel tips, shoe buckles, trouser buckles, buttons, hooks, trouser hangers, cigarette cases, tobacco boxes, cigarette-lighters, pow-

derpuffs, various smokers requisites, bagmakers littings (briefcases, trunks, etc), snap-fasternes, sew-on buttons, riveting buttons, fancy buckles, eylets various smokers'requisites, and hooks, velvets, barber's requisites, fitting for braces and suspenders, safety pins, film reels, seals, knitting needles, crochet needles, tin-openers, thimbles, slide fasteners, razor blade sharmeners

thimbles, since starpeners.
Chainlets, blinds, etc. Buttons, upholsterer's tacks, handbag fitting, suitholsterer's tacks, handbag fitting, suitholsterer's tacks, handbag fitting, suitholsterer's titting, sumbrelas, zipholsterer's lipstick cases. All kinds of
needles, card and gill pins. Key ringsholsterer's fitting, springholsterer's fitting, sprin mouldings.



73

#### FITTINGS 74

Househoold-pipe, gas-pipe, laboratory, sanitary, porcelain fittings, central heating fittings, fountains, regulating cocks, air-valves, pressure gauge accessories, compressor fittings. Measuring instruments, such as gas-meters, water-gauges, pressure-gauges.

PRAGCEXPORT MOTOKOV

MOTOKOV KOVO

## METAL CONTAINERS

50, 100, 200, 400 or 600 litre barrels. 50, 100, 200, 400 or 600 litre barrels.
Drums, cylinders, transport cases. Dustbins. Narrow or wide neck cans. Tinned or aluminium milk-cans. Plain tins. Tearor coffee-tins, etc. Tubes and coils.

### FURNITURE AND BUILDING FITTINGS . 76

Brano automatic door-closers, Mortice Brano automatic door-closers, and other locks. Builders' hardware, Boand other locks. Builders nardwate, somero hinges, spring type closers, door stops, door catches, window fittings, door bolts, pulls. Builders' iron mongery, such as handles, knobs, window buffers, etc. Cylinder mortice door locks,

iron cylinders for locks, plain mortice locks. Furniture locks, tumbler mortice dead locks, castors, plain furniture locks. Curtain poles. Galvanized sets for locks. Curtain poles. Galvainges. sinks. Furniture and piano hinges.

#### HARDWARE **77**

Braces, hand drills. Socket wrenches, Bricklayers' tools. Various types of pliers, hammers, hand vices, spanners and box spanners. Plate shears, watch-maker's tools. Electric solders, electric glue-pots. Tool kits. All types of vices.

Angle irons, water levels, measuring tapes, folding metres and measuring instruments. Shovels, bars, hoes, pick-MOTOKOV axes, etc. Rollerchains, Gall chains, Busch chains, Oil field chains, PIV chains.

#### PREFABRICATED BAYS 78

Garages  $3\times5$  metres, bays  $7\times5$  metres,  $7\times15$  metres. Bicycle stands. MOTOKOV

ART 79

Manufacture of statues, plaques, bad-MOTOKOV ges, medals, grates.

#### LAUNDRY AND CLEANING EQUIPMENT 80

Washing machines, hydroextrators, ironing presses, drying equipment and implements. MOTOKOV

#### **Barbers** and Hair Dressing Equipment

#### 80/002 ÚSV 2 Hair Drier

for drying of hair in larger hair dressing shops. There can be connected up to six drier to one central ventilator.

#### 80/003 Permanent Wave Electric Apparatus

Operational Voltage 220 V. Input 1080 W. Weight 25 kg.

#### 80/004 DRUKOV Barbers and Hair Dressing Equipment

Stool. FAK barbers semi-American chair. The chair is practical, the back is tiltable. The men's table No. 1. serves as corner table if there are more tables. Ladies metal chair can be used either for manicuring or hair drying. Men's table No. 2 for men's service can be also used as a centre table. Ladies table No. 103 for simple service. Ladies table No. 107 for several operations. Footrest, children revolving, ladies chair of metal has a tiltable back; manicuring table.

# Hospodářské noviny

an economic weekly, keeps well informed economic workers whose primary interest is to follow and foster

- · economic utilization of new technology
- · increase of the productivity of work and
- in industry, building industry, transport, agriculture and trade, as well as
- economic utilization of raw materials, fuel and power

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### MEDICAL APPARATUSES 81

Examples of complete medical working Examples of complete medical working places, e. g., complete dental surgery, complete operating theatre, X-ray equipment. Mobile equipment for mass chet survey of large groups of citizens, chest work of the exhibition. Of the exhibited medical apparatuses we introduce the following:

#### 81/001 STE 36 Dental Oil Sterilizer

For sterilization of dental handpieces and angles at a temperature of 140—KOVO 180 C.

#### 81/002 CHIROSTERIL Electric Hot-Air Sterilizer STE 43

For sterilization of surgical instru-ments, dressing glass-ware, etc. KOVO

#### 81/003 Sterilizing Dressing Containers

Designed for sterilizing and sterile storing of dressings, waddings, bandages, etc.

### Sterilizing Dressing Drums

Designed for sterilizing and sterile sto-ring of dressings, waddings, bandages, etc. KOVO

#### 81/005 NEOSTERIL Sterilizer with Pedestal

Electric hot-air sterilizer for steriliza-Electric hot-air sterilizer for steriliza-tion of surgical instruments, glass-war-es, dressings, etc. The required sterili-zing temperature is automatically con-trolled. Sterilizing temperature range: 60°-200 °C. Power consumption: 1000 W. KOVO

#### 81/006 CHIRANA M 96 Mobile Operating Stool

For comfortable working and minimizing of the dentist's fatigue during long-lasting operations.

### 81/007

Different sizes suitable for injection treatment. Sterilizable at a temperature of up to 2000 °C. Syringes

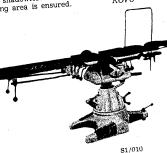
### Hypodermic Needles

Made of stainless steel, different sizes

## Mobile Stand Operating Light

The light beam can be adjusted to any required direction. Uniform, intensive and shadowless illumination of the operating area is ensured.

KOVO



#### 81/010 CHIRUS Operating Table

Designed and suitable for all kinds of routine surgical operations orthopaedic ones.

#### 81/011 CHIREX UNIT

The mobile case of this unit houses an electromotor with controllable revolutions and a flexible shaft to which rotating or oscillating instruments can be attached which are required to perform different surgical operations.

31/012

#### 81/012 N-42 Anaesthesia Apparatus

Intended for short as well as long-lasting surgical operations. Ensures long-lasting and deep anaesthesia as well as controllable respirations.





#### 81/013 X-ray Tubes and Rectifier Valves

From the smallest to the rotating anode types. Set of rectifier valves suitable for X-ray units of different output.

KOVO

#### 81/014 STOMAX Dental X-ray Unit

Suitable for radiography of teeth, jaws, skulls, bones and different parts of the body. Fitted to a mobile stand. Output of X-ray tube: 65 kV, 15 mA. 40—60 c/s.

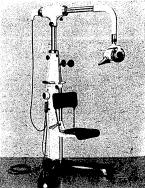
#### 81/015 CHIRAX Portable X-ray Unit

Small portable X-ray unit of high output, intended for radiography of bones, fluoroscopy can be carried out by means of a hand fluoroscope. The X-ray unit is easily portable in two cases. Maximum output: 65 kV, 15 mA. KOVO



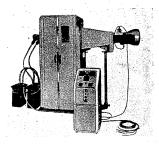
81/016

81/014



#### 81/016 DUROMETA 125 Four-Valve Diagnostic X-ray Unit

Suitable for radiography as well as fluoroscopy. Maximum output of high-voltage generator is 125 kV during radiography and 100 kV during fluoroscopy. KOVO



81/017

#### 81/017 Photofluorography Equipment

Intended for mass chest survey of large groups of citizens. KOVO

#### 81/018 MOTOSKOP 312 X-ray Examination Tilting Table

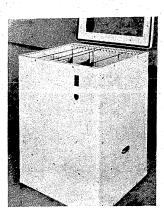
Designed for fluoroscopic and radiographic examination. KOV  $\overline{O}$ 

#### 81/019 X-ray Film Drying Cabinet

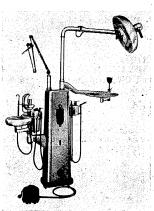
Intended for quick drying of X-ray films. KOVO

#### 81/020 UNIDENT B Dental Equipment

A well equipped outfit for dental sur-



81/019



81/020

#### 81/021 COMPLET E Universal Dental Equipment

Fitted with MINIDENT dental X-ray unit and air compressor. This equipment is provided with all the necessary appliances and instruments required for routine dental work.



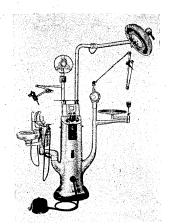
81/022

#### 81/022 CHIRANA M 94 Motor Dental Chair

A double-telescope dental chair with electric motor drive. Power consumption: 200 W. KOVO

#### CHIRANA M 97 Combined Motor and Oil Pump Anaesthetic Dental Chair

By depressing the raising lever the electromotor of the double-telescope oil pump is switched on and the chair is raised. During power supply failures, the oil pump can be actuated by the foot drive.



81/021



81/023

#### 82 PLUMBERS' AND BUILDING MATERIALS

Indoor and outdoor piping, enamelled washing troughs, water taps with outlets, sinks, W.C.'s, tanks, basins, feeding apparatus, cast boilers and sheet iron baths, children's baths, sinks.  $\frac{MOTOKOV}{MOTOKOV}$ 

#### FARMING REQUISITES 83

Steamers for potatoes, for solid fuels. Electric potato steamers, etc.

MOTOKOV

#### 84 REQUISITES FOR THE TEXTILE INDUSTRY

Various bobbins.

PRAGOEXPORT

#### 85 BOWDEN CABLES, ARMOUR HOSES, HELMETS

Helmets of plastics for miners and motorcycle riders.

MOTOKOV

Machines

MAFLEX grinders.

MOTOKOV

#### STEEL KITCHENS

LIGNA

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